

# KCStat

[kcstat.kcmo.org](http://kcstat.kcmo.org)

March 14, 2017

#KCStat

## Infrastructure and Transportation



# Infrastructure and Transportation

To improve the City's physical infrastructure with special attention to streets, curbs, sidewalks, and water/sewer systems, and strengthen the multi-modal transportation system in ways that enhance connectivity among neighborhoods, business centers, and cultural/health/recreational destinations. 2

# How To Get There: 2017-2022 City Objectives For Infrastructure and Transportation

#	Objectives relating to <b>Strategic Asset Management</b>	Target Timeframe
1	Develop a five-year citywide infrastructure asset management plan aimed at providing reliable service to residents, meeting federal requirements and maximizing the useful life of all assets, including, but not limited to the following: (May 2019) a. water, sewer, and stormwater; b. roadways; c. sidewalks and curbs; d. signals; e. street lights; f. trees; g. parks; and h. multi-modal transportation (bikes, pedestrians, and transit)	May 2019
2	Develop a financial plan to support the City's integrated infrastructure plan.	May 2017
4	Maintain a high-level of citizen satisfaction with regard to the repair and restoration of City infrastructure.	Quarterly review and adjustment
10	Implement the City's American with Disabilities Act (ADA) plan to meet the Department of Justice's settlement agreement and ensure that all projects meet ADA standards.	Ongoing
12	Expand the public art program to a broader category of assets.	2018

# How To Get There: 2017-2022 City Objectives For Infrastructure and Transportation

#	Objectives relating to <b>Resilient and Sustainable Assets</b>	Target Timeframe
8	Implement Kansas City's Overflow Control Program to meet City's federal consent decree requirements.	Annual milestones, ending September 2035
9	Seek opportunities to reduce financial impacts of work required as part of the City's Overflow Control Program by proactively working with EPA to adjust the timeline for project completion, proposing additional green infrastructure solutions and seeking opportunities for supplemental funding sources.	December 2019
7	Implement the Envision Sustainable in all infrastructure planning and projects to maximize sustainable development solutions.	2019
6	Refine and implement strategic infrastructure investments in the Twin Creeks and other growth areas that capitalize on natural features, promote unique development patterns, build civic space, and promote sustainable design and construction.	May 2019
3	Develop and implement a city-wide climate resiliency plan and protocols to safeguard and restore critical city infrastructure in the event of a natural disaster.	May 2022
11	Update the City's Climate Protection Plan to include Envision Sustainable practices and to enhance participation.	December 2018

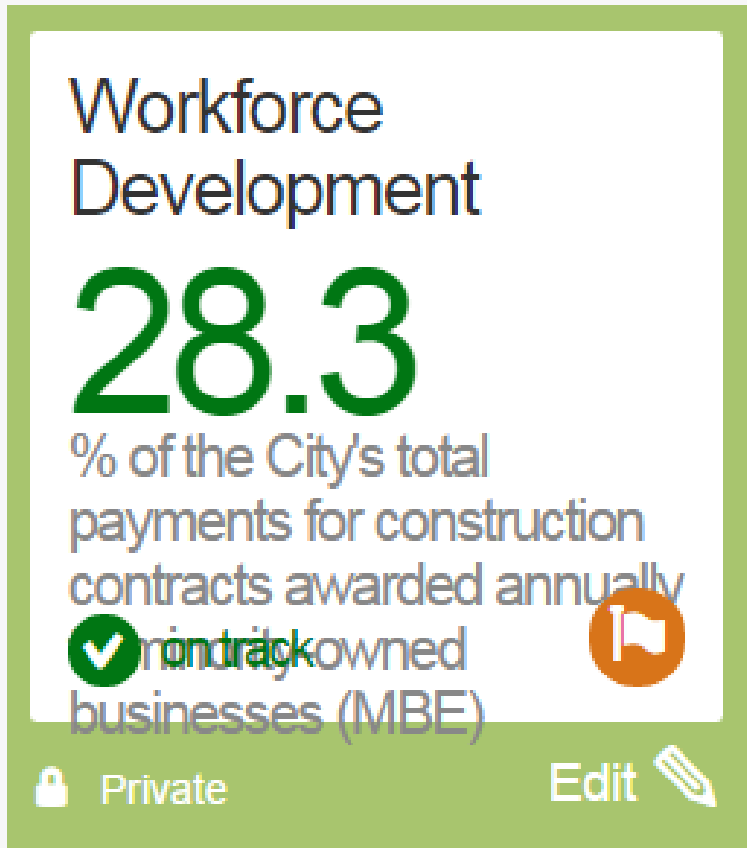
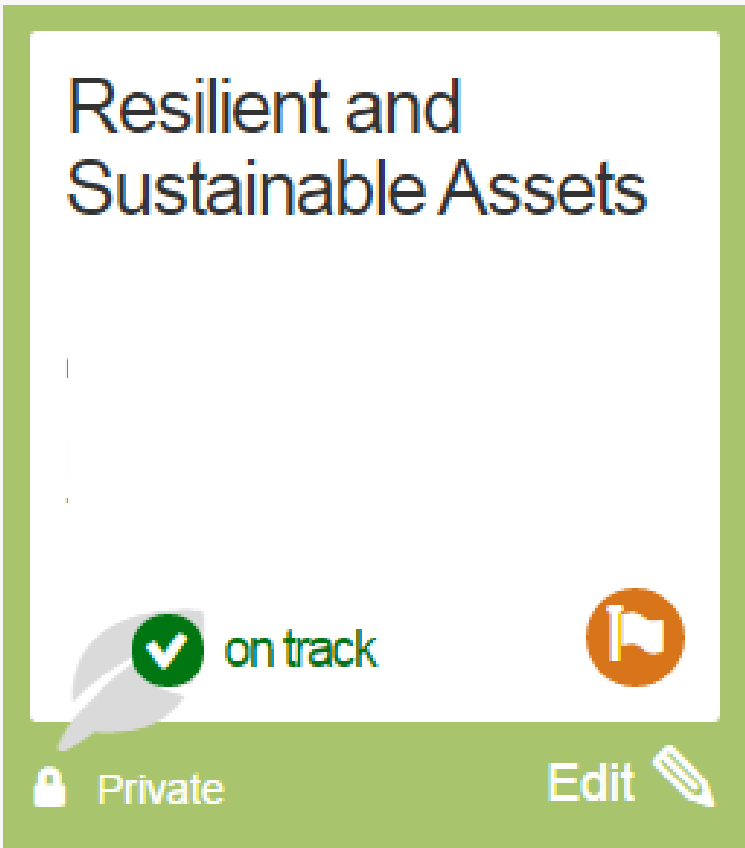
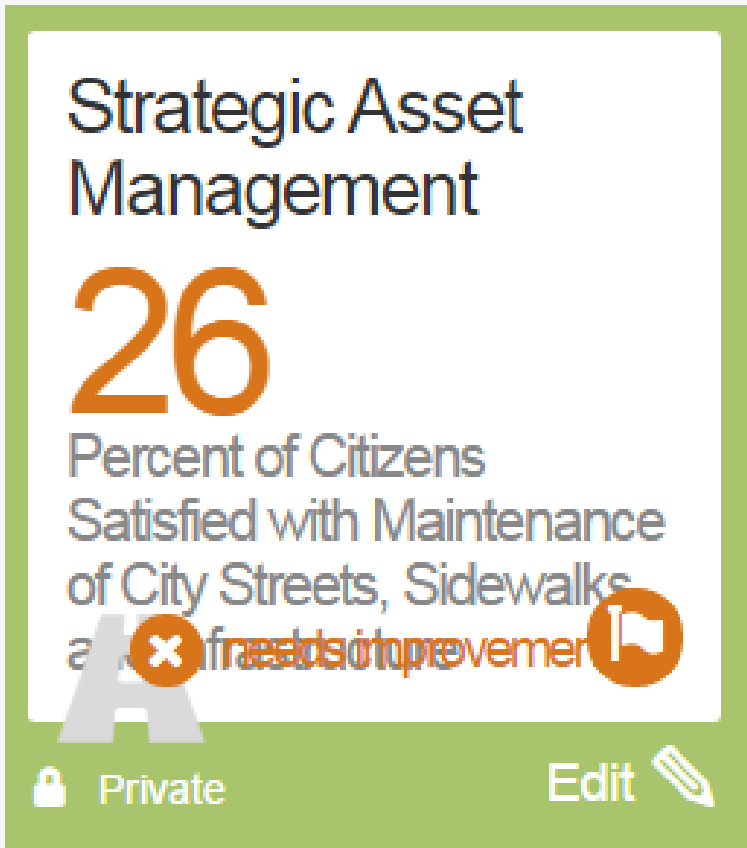
# How To Get There: 2017-2022 City Objectives For Infrastructure and Transportation

#	Objectives relating to Workforce Development	Target Timeframe
5	Support local workforce development and continue to increase the number of local, minority, and women-owned business contracts by increasing awareness and response to City-issued RFQ/Ps through advertisements, Annual Capital Improvement Overview, and City-sponsored learning opportunities.	December 2018

# Measures of Success

Measures of Success	FY16 Actual	FY17 Target	FY18 Target
Percent of street segments rated average or better (PCI)	34%	28%	34%
Percent of bridges rated good or excellent (Bridge Condition Rating)	80%	70%	80%
Percent of citizens satisfied with overall maintenance of city streets, sidewalks, & infrastructure	26%	32%	32%
Percent of citizens satisfied with overall quality of public transportation	39%	43%	43%
Percent of citizens satisfied with maintenance of boulevards & parkways	62%	75%	75%
Greenhouse gas emissions from municipal operations (Thousand MT CO <sub>2</sub> e)	TBD	292	286
Days to complete 90% of water main repairs & restorations	27	30	30

# Infrastructure and Transportation: KCStat Dashboard



# Strategic Asset Management

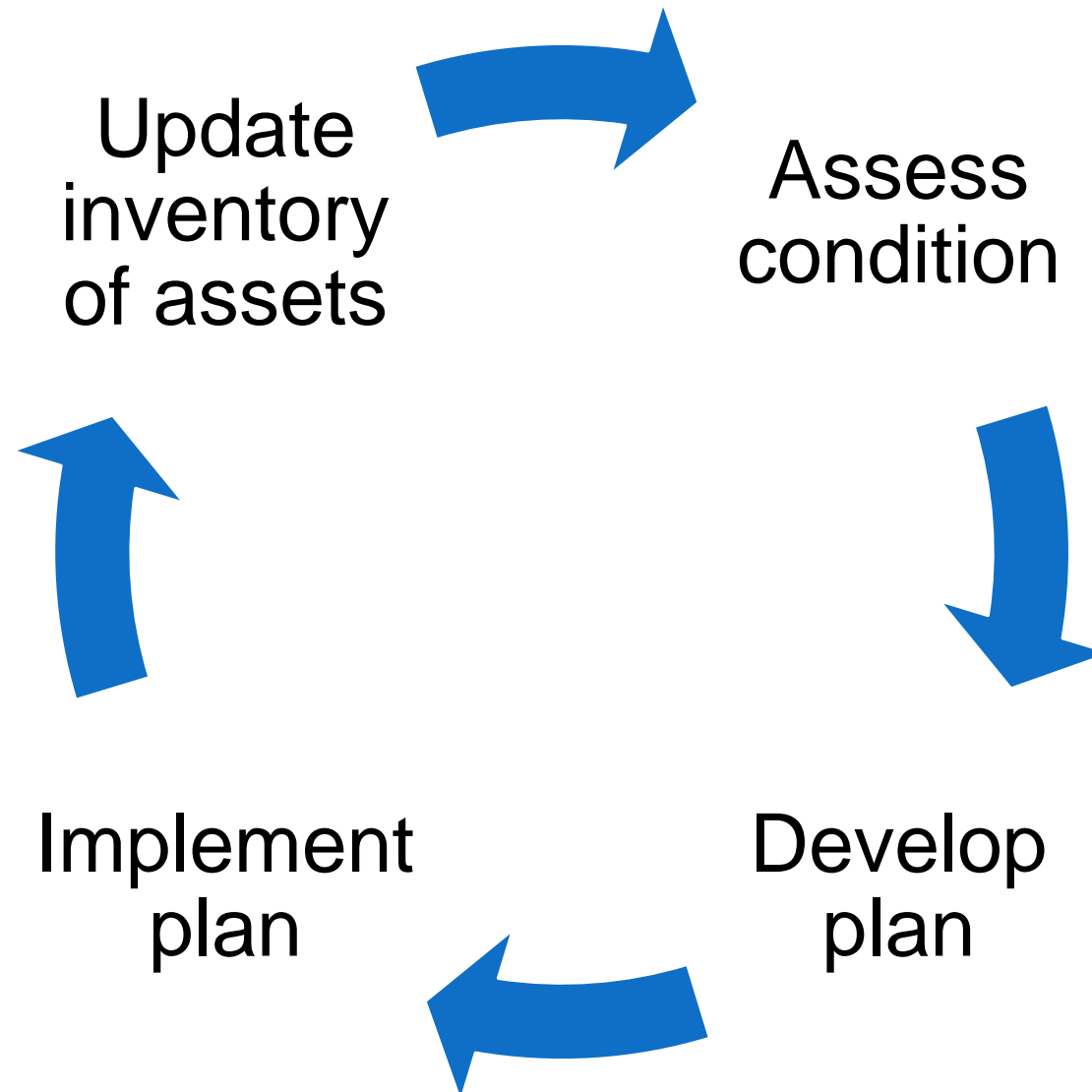


# Objective

Develop a five-year citywide infrastructure asset management plan aimed at providing reliable service to residents, meeting federal requirements and maximizing the useful life of all assets, including, but not limited to the following:

(May 2019) a. water, sewer, and stormwater; b. roadways; c. sidewalks and curbs; d. signals; e. street lights; f. trees; g. parks; and h. multi-modal transportation (bikes, pedestrians, and transit)

# Asset Management Planning Cycle



# Asset Types and Status (PW, Parks, CPD, GSD)

Complete

In Progress

Future

Responsibility	Asset Types	Inventory Established	Condition Assessed	Plan Developed
Public Works	Roadways			
	Street lights			
	Bridges			
	Signals			
	Sidewalks and curbs			
	Signs			
Parks and Recreation	Parks			
	Trees			
City Planning	Bicycle infrastructure			
General Services	Public buildings			
	Public art			

# Asset Types and Status (WSD)

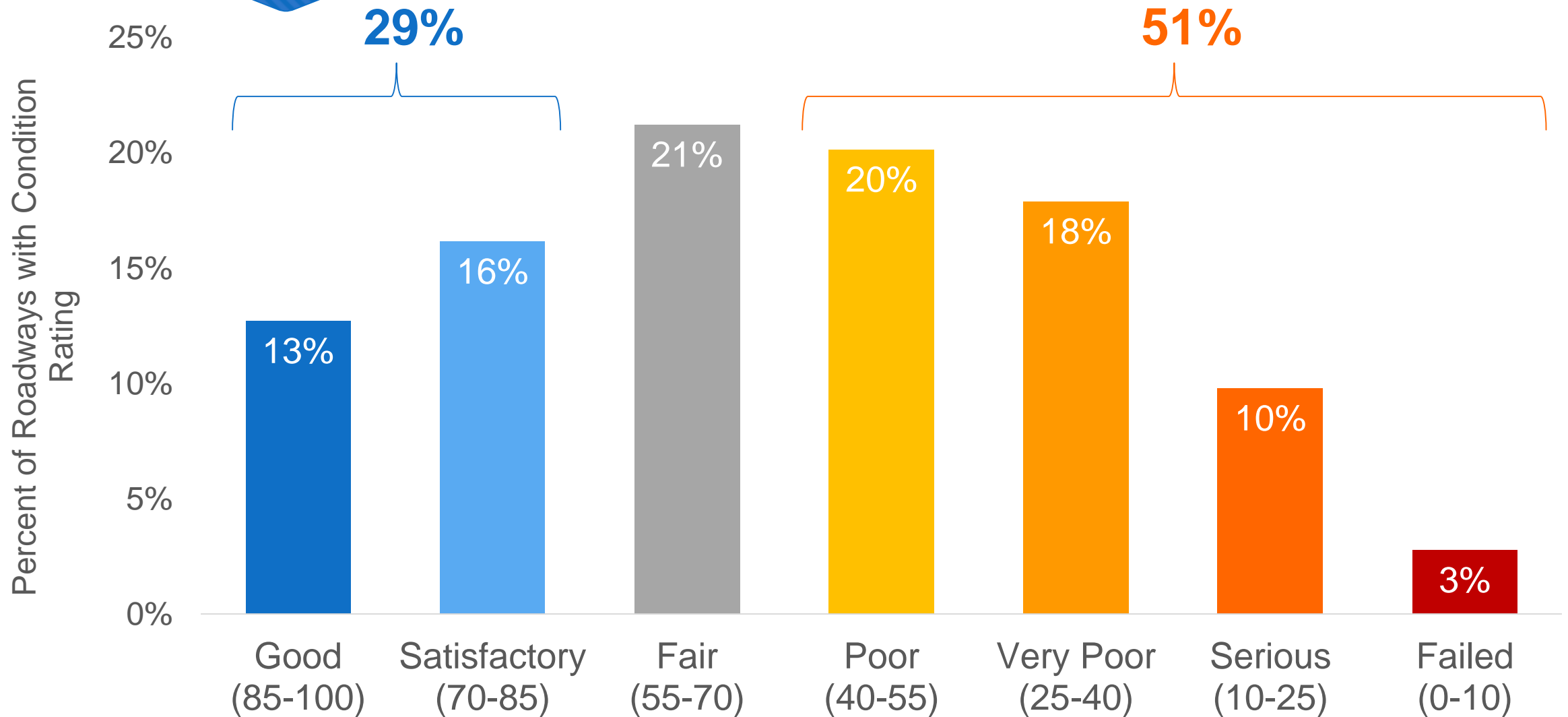
Complete

In Progress

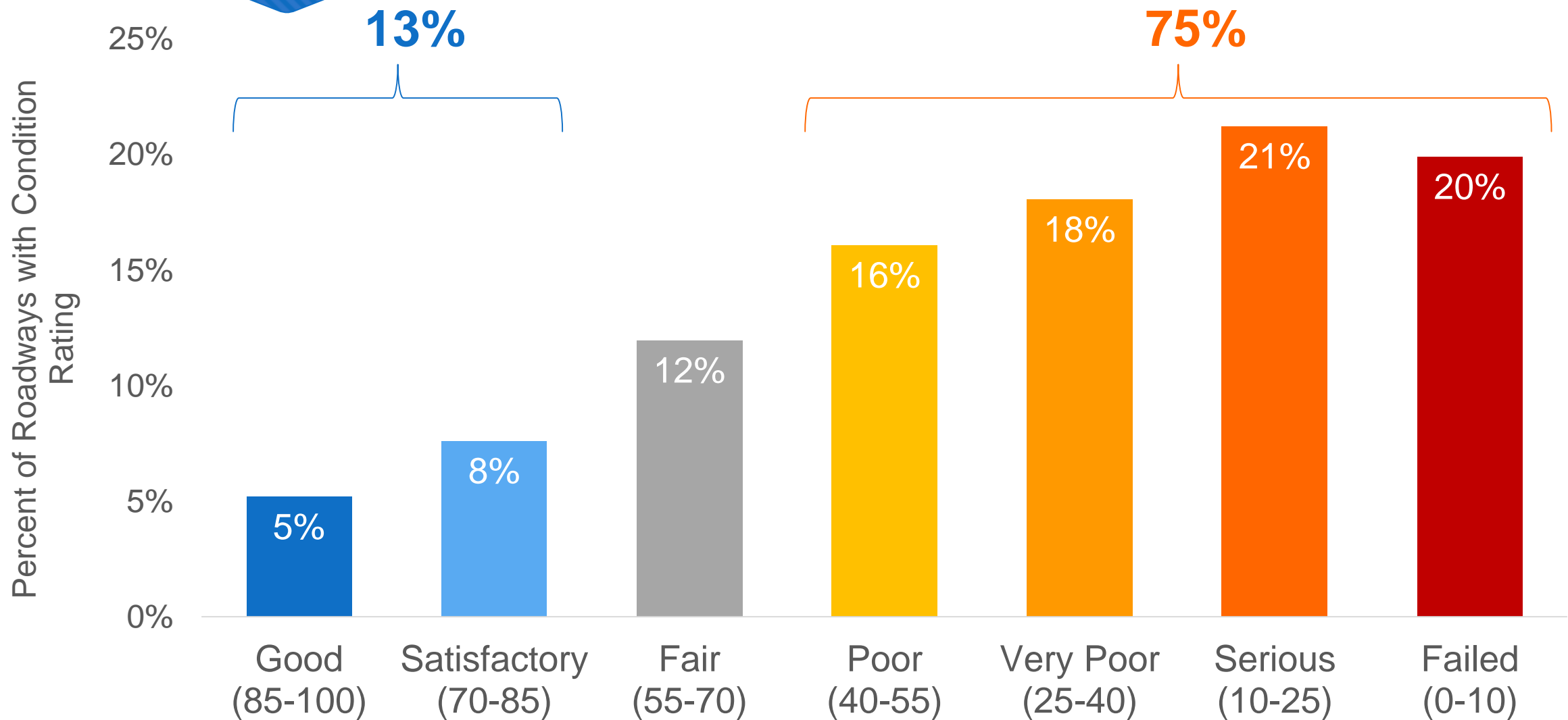
Future

Responsibility	Asset Types	Inventory Established	Condition Assessed	Plan Developed
WSD: Water Utility	Distribution & Transmission Mains			
	Pump Stations & Treatment Plant			
WSD: Wastewater Utility	Sewers			
	Pump Stations & Treatment Plants			
WSD: Stormwater Utility/Flood Control	Sewers and Inlets			
	Levees			

# Pavement Condition Index for Streets: 2017



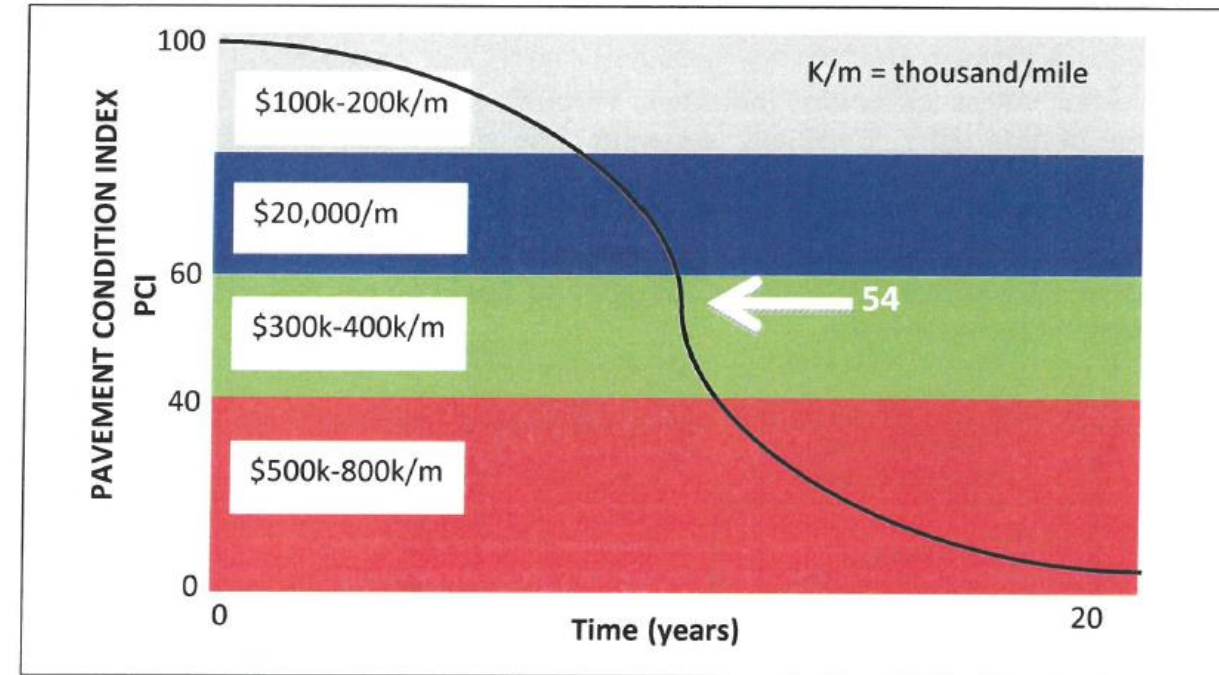
# Future Pavement Condition Index for Streets: 2027 (with same level of investment)



# Roads Needs Assessment Study

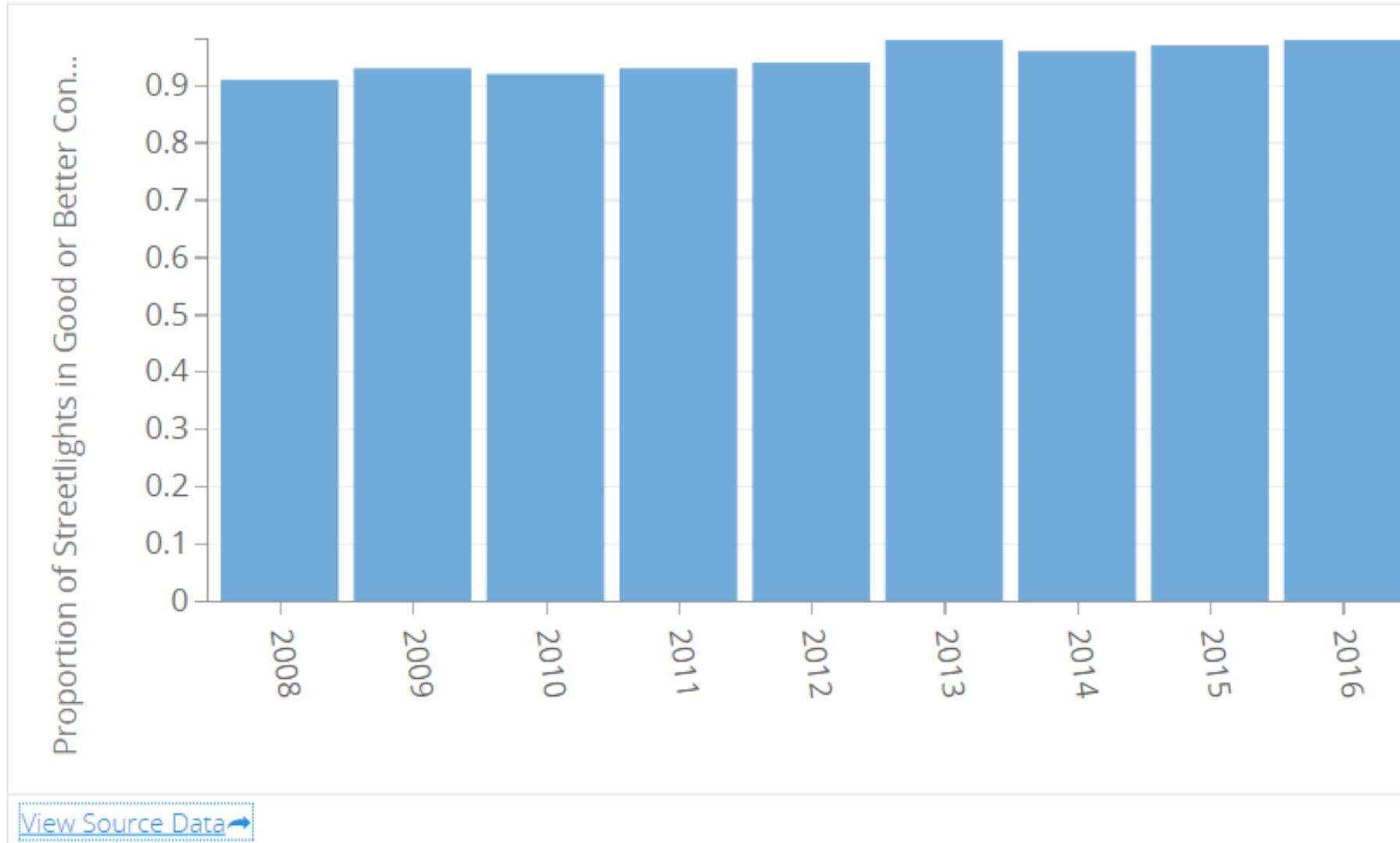
## Summary of recommendations:

- Invest to avoid further deterioration of Good/Fair road to Poor/Fail condition and increased cost of deferred maintenance
- Fix it first approach: focus on repairing, maintaining, rehabilitating, reconstructing, and enhancing existing roads
- Dedicate funds to preventative maintenance to make more cost-effective repairs
- Use asset management/best management practices to ensure that the right treatments are applied to the right roadways at the right time



*Average PCI for KCMO roads of 54 puts the system in a critical condition. At this level, the pavement shows a significant increase in the rate of deterioration and preventative maintenance cost.*

# Street Lights Condition



98% of street lights in good or better condition in 2016



# Street Lights Planning and Maintenance

## Routine maintenance of lighting facilities

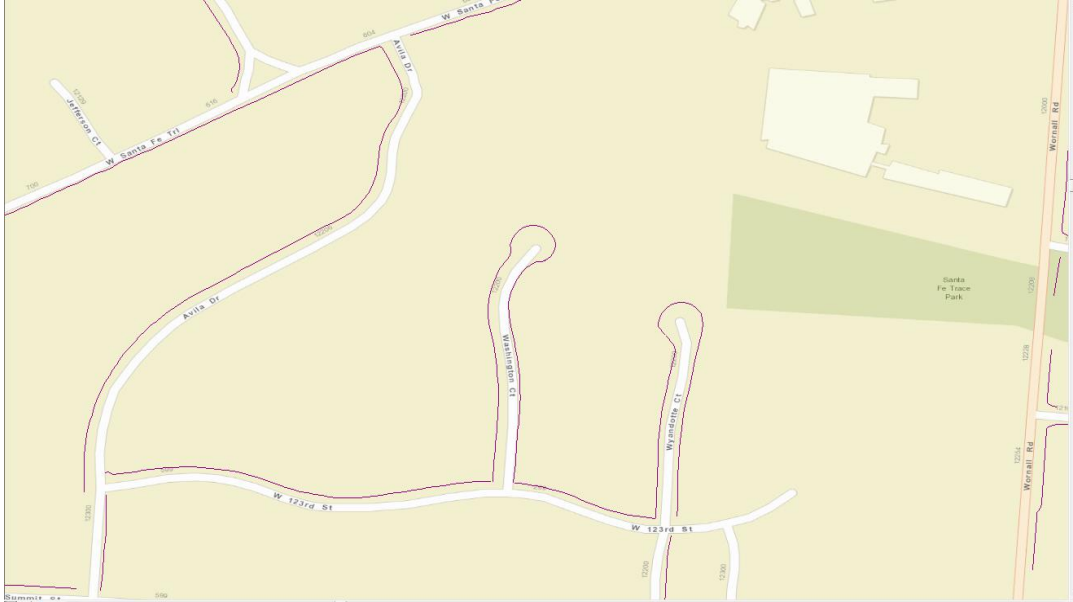
- Call Center services to receive and record outages
- Emergency response and “make safe” action
- Repair of any streetlight outage
- Repair of minor storm or minor vandalism outages
- Streetlight inspection, luminaire cleaning, and group re-lamping
- Night patrol for reporting of luminaire outages
- Pole straightening, cleaning, and painting
- Dispatch, data entry and service reporting

## Special maintenance of lighting facilities

- Temporary removal and replacement
- Permanent relocation, addition or adjustment
- Pole painting
- Specialty equipment
- Aesthetic lighting on Broadway and Heart of America Bridges and Foyer lights
- Detailed damage assessment of major storms
- Repair of major storm damage
- Repair of major vandalism damage
- Potential LED and smart control systems change-out
- As-built/system map correction (on-going and historical)

Not currently included in maintenance or funded: routine tree trimming around streetlights

# Sidewalks/Curbs Inventory

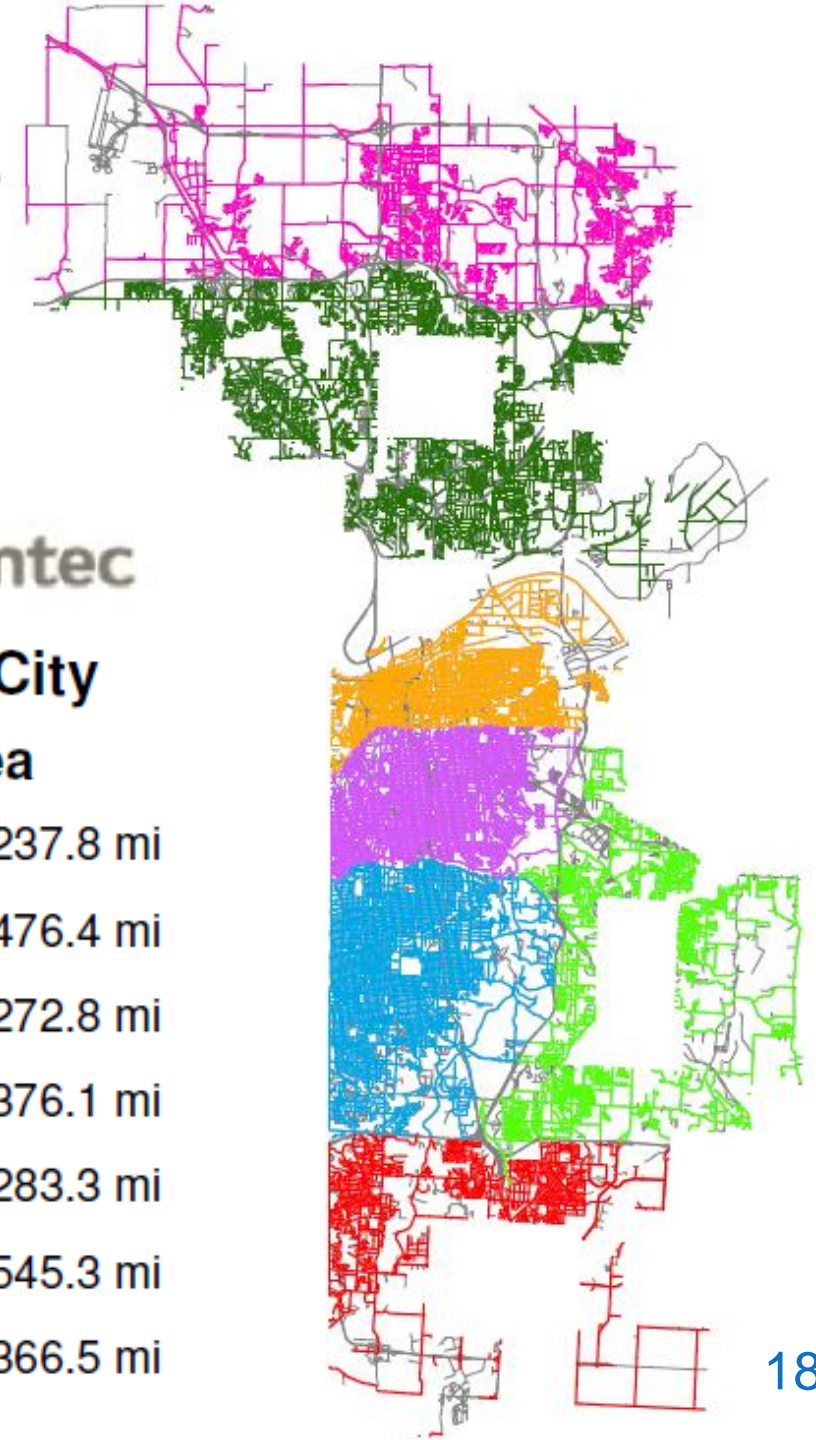
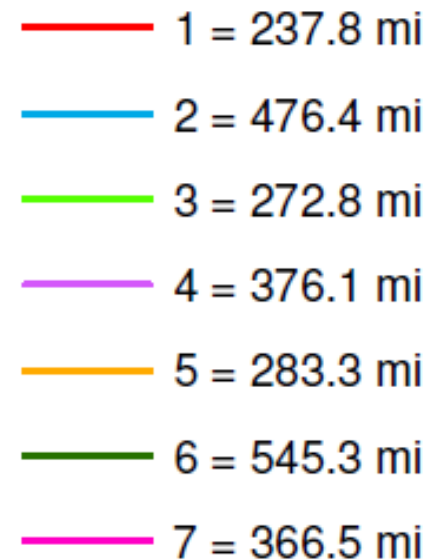


Inventory is 75% complete,  
expected to be complete by April

Still waiting  
on data for  
these zones



## Kansas City Audit Area





# Proposed Plan for Sidewalks/Curbs

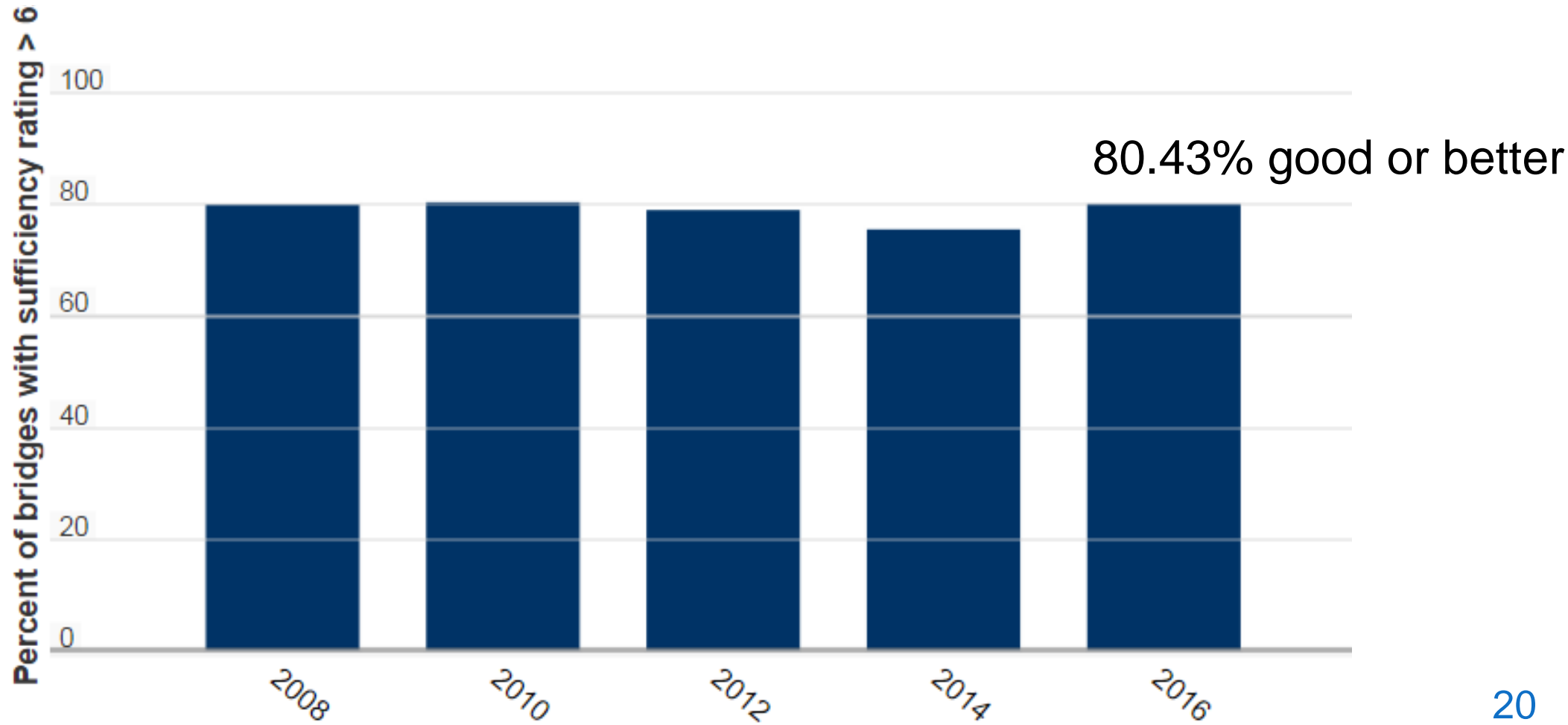
Question #1 on the April ballot calls for approving the issuance of \$600 million in bonds to repair streets, bridges, and sidewalks. \$150 million of this would be dedicated to creating a new, city-funded sidewalk program that eliminates the homeowner assessment.

- A key feature of the plan calls for a complete change in the way the City repairs sidewalks.
- The bonds would create revenue to allow the City to pay for residential sidewalks repairs, rather than charging homeowners.
- The City would create a program to systematically evaluate, repair and replace sidewalks.
- The goal is to make it through two citywide cycles over 20 years.



# Bridge Condition Rating

■ Percent of Bridges in Good or Better Condition (Sufficiency Rating > 65)

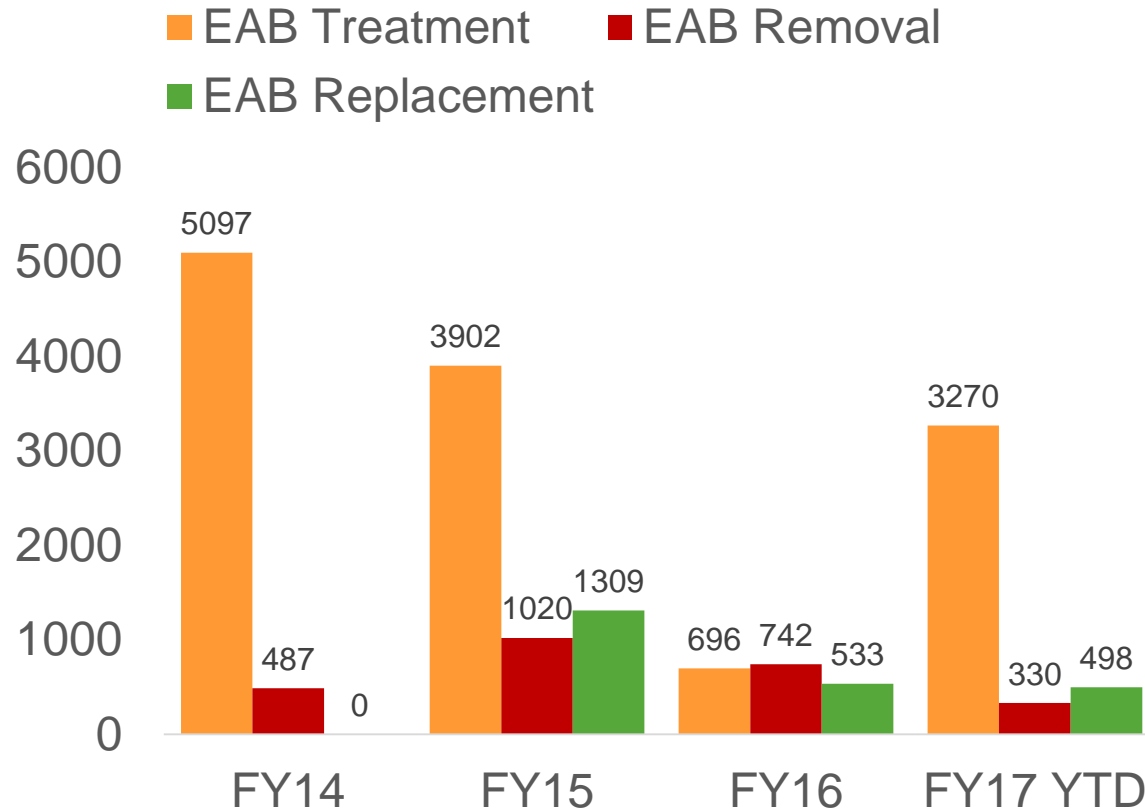


# Bridge Priority Recommendations

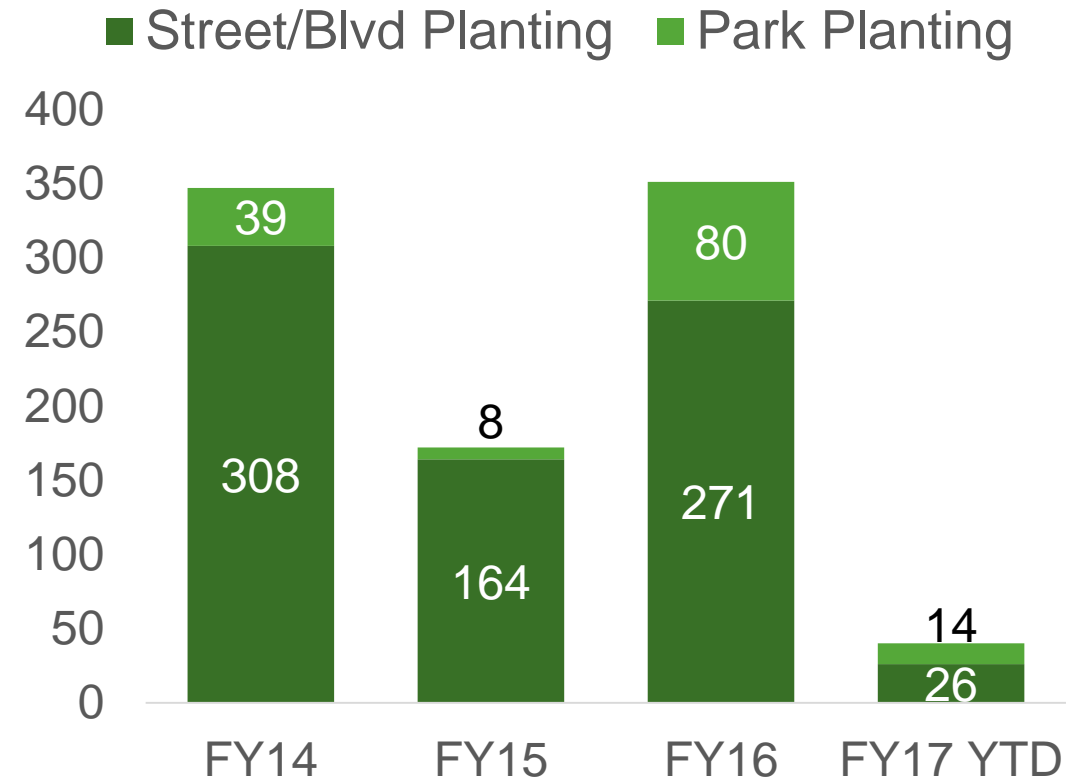
Location	Sufficiency Rating	Structural Rating	Work Needed	Estimated Cost	Funded?
Kenneth Road over Big Blue River	None (closed)		Replace	\$4.5M	Partially
Byrams Ford over Round Grove Creek	None (closed)		Replace	\$1.4M	GO bond
Hillcrest Road over Small Creek	7.0	72.4	Replace	\$2M	GO Bond
Gregory Blvd over Big Blue River and Union Pacific Railroad	10.5	63.2	Rehab	\$5.3M	GO bond
N. Antioch over Rock Creek	17.4	72.9	Replace	\$2M	GO Bond
Raytown Road over Lumpkin's Fork	30.7	106.0	Replace	\$3.7M	Unfunded
Tiffany Park Road over Small Creek	51.2	80.1	Replace	\$850K	Unfunded
12 <sup>th</sup> Street Viaduct over Big Blue River	61.0	91.1	Rehab	\$5M	GO Bond
Roanoke Parkway over Brush Creek	63.7	88.2	Replace	\$3M	GO Bond
Benton Boulevard over Brush Creek	66.5	104.3	Rehab	\$3.7M	GO Bond
NE 104 <sup>th</sup> Street W of N Willow Avenue	76.0	9.6	Replace	\$550K	TIF
155 <sup>th</sup> Street over Lumpkin's Fork	99.7	10.9	Replace	\$1.4M	Funded

# Trees: Emerald Ash Borer and Tree Planting

## Emerald Ash Borer Efforts



## Other Tree Planting



FY17-FY18: 1,000 removals and planting annually (all untreated trees removed)  
FY19-FY22: 250 removals and plantings annually of treated trees



# Bicycle Master Plan Background

○ Starting in late 2016, the City Planning & Development Department began a comprehensive update of the Bike Master Plan. The new plan must:

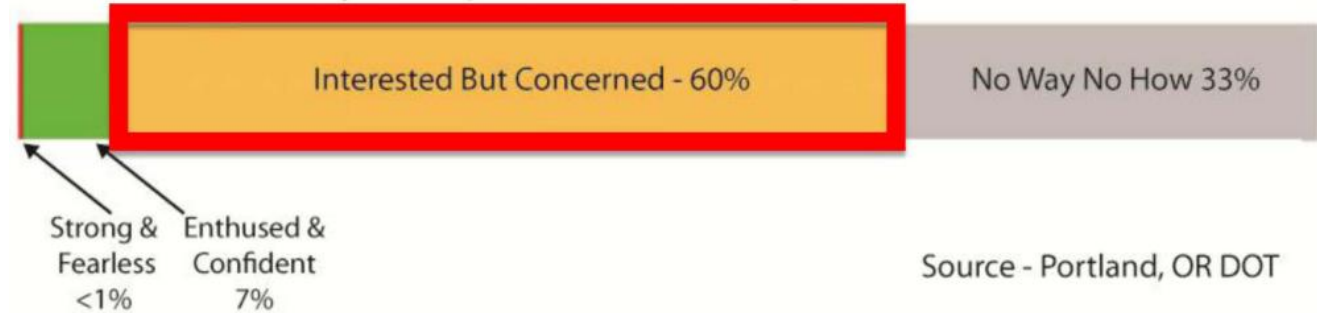
- **Frame the condition** of cycling in Kansas City today
- **Set a clear vision**, set of goals & objectives
- **Establish performance indicators** to measure achievement
- **Adopt additional designs** & guidance for their use
- Establish bike routes that **meet both transportation & recreation needs**
- Conduct an **evaluation of Bike KC routes ease of use**
- **Recommend specific network** of bicycle facility types accommodating average users
- **Update zoning & development** code to support cycling goals
- **Identify City agencies responsible** for specific projects
- **Provide initial cost estimates**, project prioritization & funding
- Identify potential **funding sources**
- **Incorporate implementation** into resurfacing & CIP
- **Describe educational, encouragement & enforcement initiatives**



# Bicycle Master Plan Approach

- The Plan will capitalize on local & national momentum.
- The Plan will incorporate the “6 E’s”:
  - Engineering
  - Education
  - Encouragement
  - Enforcement
  - Evaluation
  - Equity
- The Plan will focus on making bicycling a viable transportation option for all users. Specific care will be paid to the “interested but concerned” user.

## Four Types of Cyclists By Proportion of Population



**“Strong & Fearless”** – Cyclists who are very comfortable operating in the roadway, similar to operating as a vehicle.

**“Enthusied & Confident”** – Cyclists comfortable riding in some roadways, but prefer bicycle facilities separated from vehicular traffic.

**“Interested but Concerned”** – Largest group of cyclists & would like to ride more for transportation & recreation, but have safety concerns that prevent them from doing so.

**“No way, No How”** – People with no interest in riding a bike for transportation.

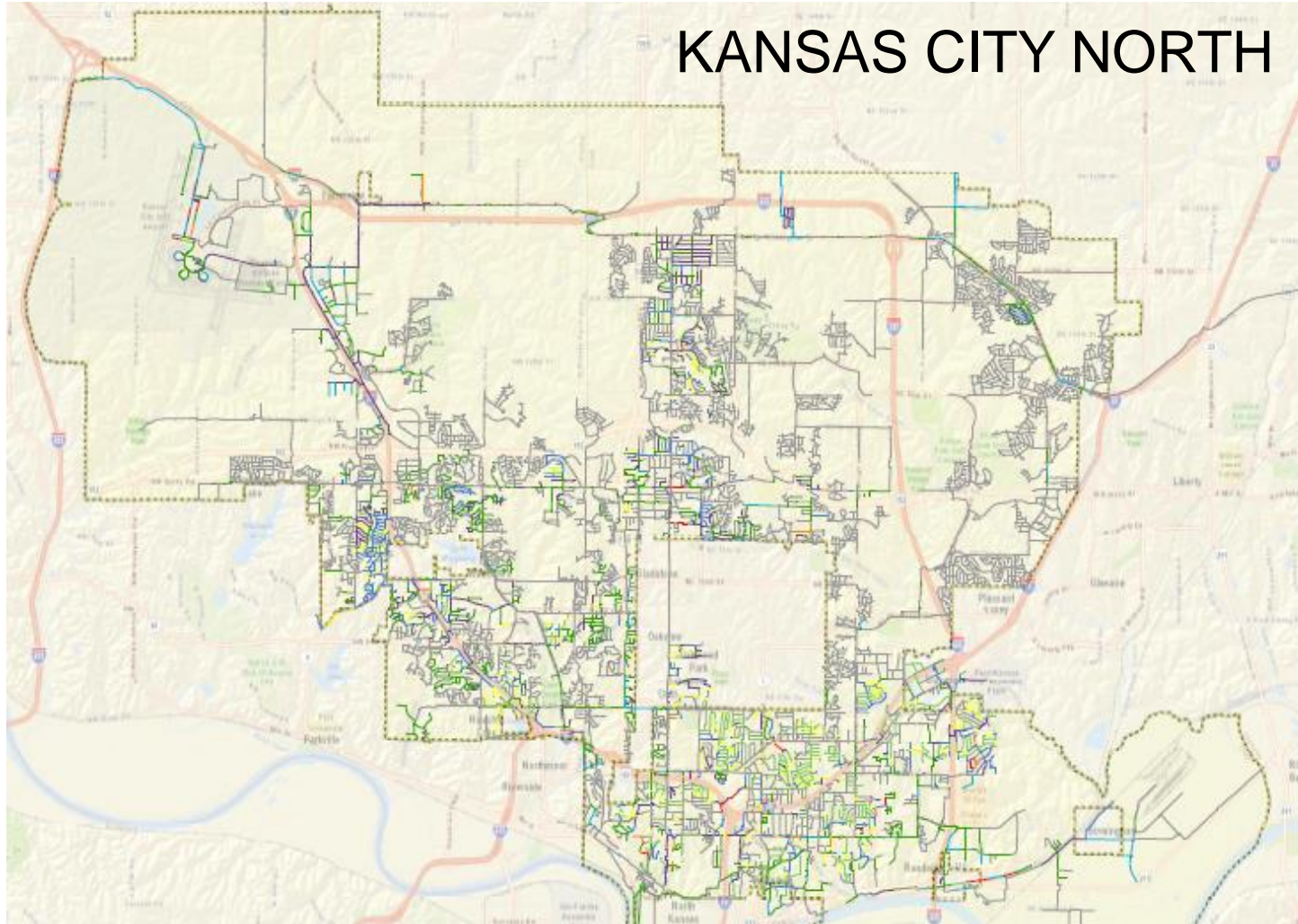


# Bicycle Master Plan Timeline

- Targeted completion date of plan is Q1 of 2018
- City Planning staff leading effort, but is supported by other city departments such as Public Works, Parks & Recreation, Health, & others.
- Steering Committee & Technical Committee have been formed & is comprised of:
  - City departments & BPAC representatives
  - Partner agencies (MARC, MoDOT, School Districts, Children's Mercy, etc.)
  - Advocacy Groups (Revolve KC, Mattie Rhodes Center, BikeWalkKC, etc.)
  - Neighborhoods
- Public outreach is critical element in plan formation ([www.kcmo.gov/kcbikeplan](http://www.kcmo.gov/kcbikeplan))



# Water Master Plan: Heat Map



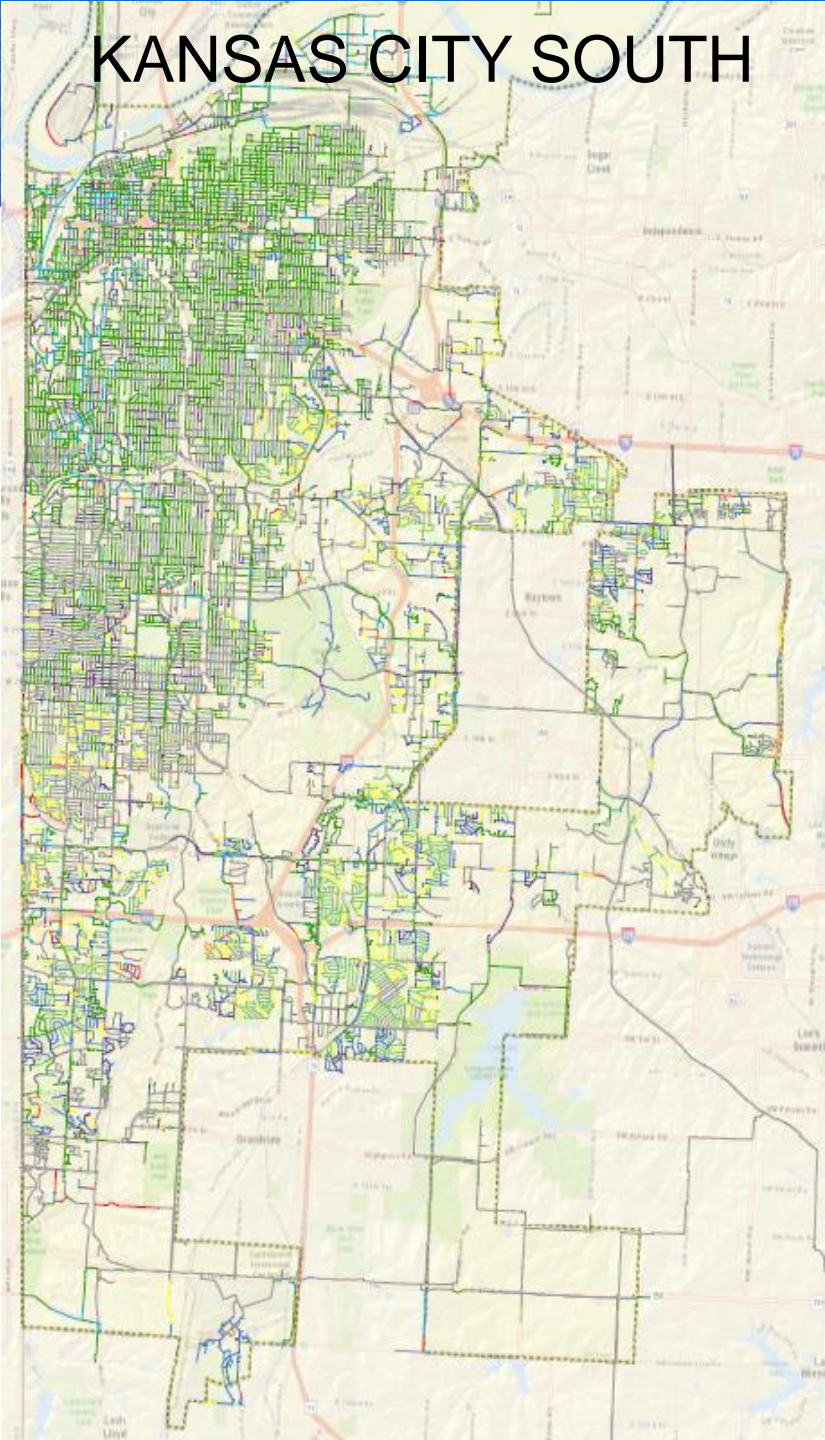
		Likelihood of Failure										Group	
		1	2	3	4	5	6	7	8	9	10	Miles	
Consequence of Failure	10	0.59	0.45	0.00	0.37	1.19	1.52	0.99	0.19	0.00	0.44	A	14.21
	9	1.92	6.99	0.00	1.24	1.96	3.80	0.55	0.36	0.37	0.41	B	17.42
	8	10.11	0.78	0.03	0.86	6.48	6.84	3.14	1.63	1.05	1.40	C	103.75
	7	33.19	4.36	0.84	1.92	10.22	10.40	5.11	2.58	1.75	2.31	D	222.14
	6	30.25	9.06	1.10	4.85	16.60	23.57	9.46	7.49	3.88	6.47	E	201.94
	5	54.52	9.02	1.47	15.35	36.74	50.76	14.73	9.39	5.71	7.83	F	201.32
	4	80.89	23.32	3.54	21.96	63.39	90.63	31.01	25.26	15.47	24.84	G	69.50
	3	137.42	88.62	15.97	10.73	102.05	160.50	72.45	77.84	53.57	78.91	H	618.47
	2	227.24	96.97	21.17	22.74	139.94	243.29	62.27	75.71	64.82	86.24	Z	1230.88
	1	1.21	2.92	0.57	0.21	1.57	2.62	1.61	1.50	1.63	0.41	Total:	2679.62
Miles		Total Miles: 2,679.62											



# Water Master Plan: Heat Map

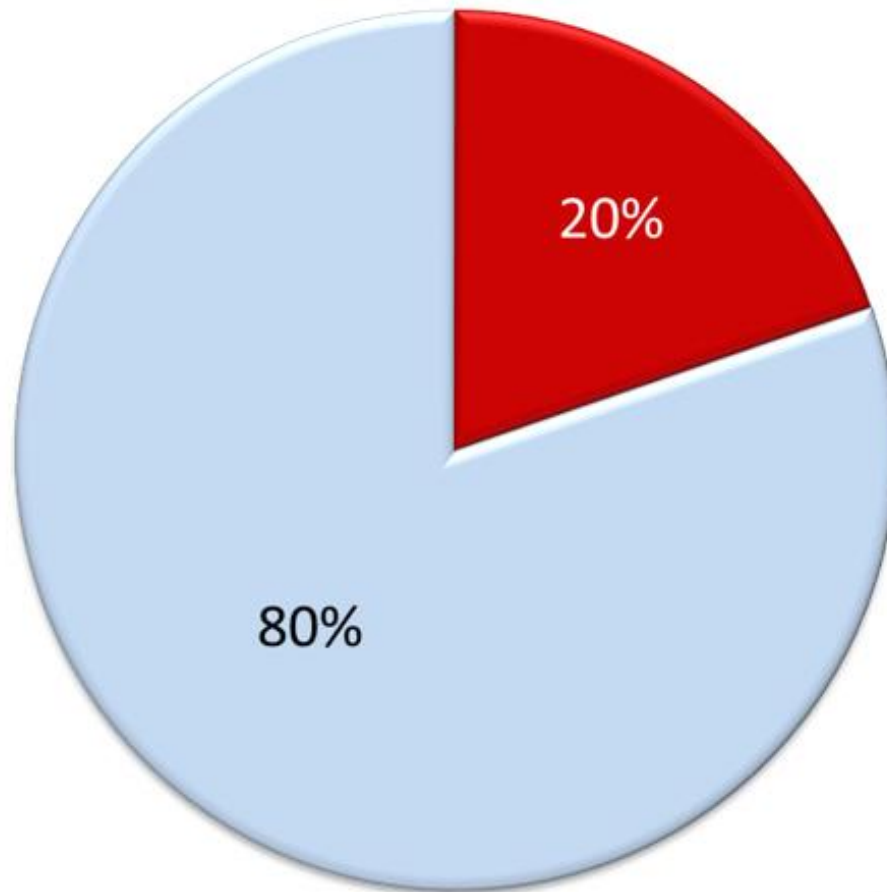
KANSAS CITY SOUTH

		Likelihood of Failure										Group	
		1	2	3	4	5	6	7	8	9	10	Miles	
Consequence of Failure	10	0.59	0.45	0.00	0.37	1.19	1.52	0.99	0.19	0.00	0.44	A	14.21
	9	1.92	6.99	0.00	1.24	1.96	3.80	0.55	0.36	0.37	0.41	B	17.42
	8	10.11	0.78	0.03	0.86	6.48	6.84	3.14	1.63	1.05	1.40	C	103.75
	7	33.19	4.36	0.84	1.92	10.22	10.40	5.11	2.58	1.75	2.31	D	222.14
	6	30.25	9.06	1.10	4.85	16.60	23.57	9.46	7.49	3.88	6.47	E	201.94
	5	54.52	9.02	1.47	15.35	36.74	50.76	14.73	9.39	5.71	7.83	F	201.32
	4	80.89	23.32	3.54	21.96	63.39	90.63	31.01	25.26	15.47	24.84	G	69.50
	3	137.42	88.62	15.97	10.73	102.05	160.50	72.45	77.84	53.57	78.91	H	618.47
	2	227.24	96.97	21.17	22.74	139.94	243.29	62.27	75.71	64.82	86.24	Z	1230.88
	1	1.21	2.92	0.57	0.21	1.57	2.62	1.61	1.50	1.63	0.41	Total:	2679.62
Miles											Total Miles:	2,679.62	

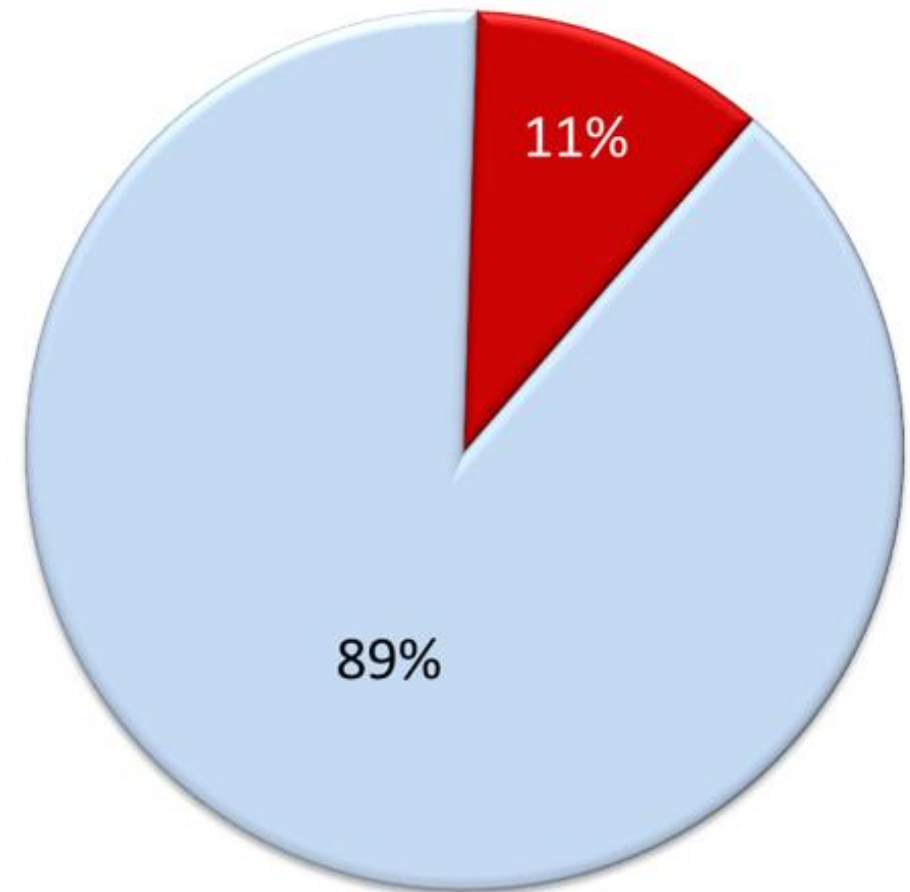


# Water Master Plan: Valve Exercising

## Initial Operability

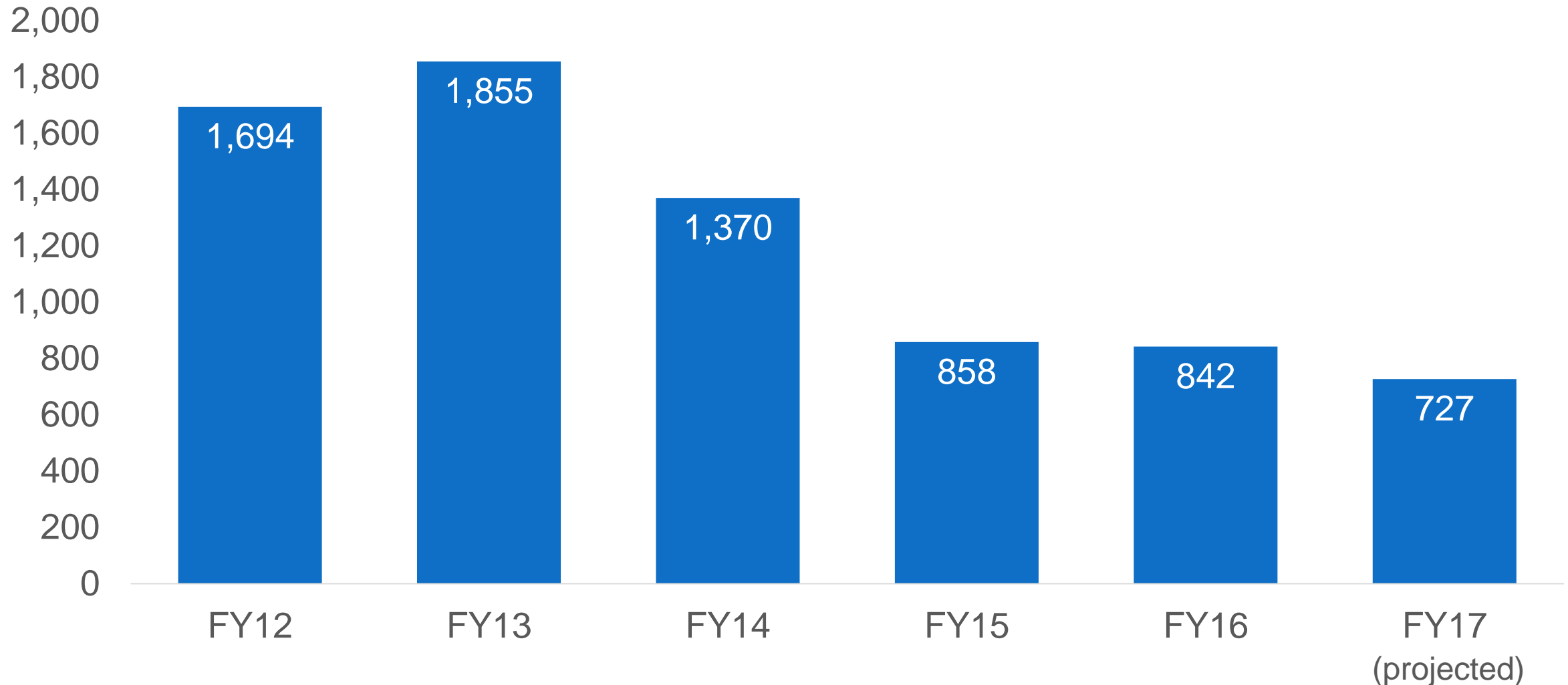


## Current Operability



**3,308 Valves**

# Water Main Breaks Over Time





# Levee Condition/Flood Control

- KCMO Water Services Department operates and maintains 11.5 miles of levees, 1.9 miles of floodwalls and 15 flood pump stations
- Joint (City and the U.S. Army Corps of Engineers) inspections are performed every year usually in April or May
- Levees are rated either "Acceptable", "Minimally Acceptable" or "Unacceptable". KCMO levees received a "Minimally Acceptable" rating for the last three years



- KCMO levees were evaluated as part of the KC Levees Project (also called 7-Levees) by the Army Corps of Engineers and as a result improvements were made in some areas:
  - NEID
  - North Kansas City
  - Fairfax (UG)
  - Armourdale (UG)
  - Argentine (UG)
  - CID (KCMO & Kaw Valley Drainage District)

# Objective

Develop a financial plan to support the City's integrated infrastructure plan.

# Proposed GO Bond Funding Summary

**Question #1** calls for approving the issuance of **\$600 million** in bonds to repair **streets, bridges and sidewalks**. This would include trails. \$150 million of this would be dedicated to creating a new, city-funded sidewalk repair program that eliminates the homeowner assessment.

**Question #2** calls for approving the issuance of **\$150 million** in bonds to improve **flood control** to prevent floodwaters from damaging homes and businesses. The City will maximize matching federal grants for flood control projects.

**Question #3** calls for approving the issuance of **\$50 million** in bonds to repair **public buildings**. This would include replacing the outdated animal shelter, in partnership with private fundraising, and renovating public buildings to satisfy federal Americans with Disabilities Act (ADA) requirements.



# Sales Tax for Capital Improvements (PIAC)

- One cent sales tax for capital improvements generates approximately \$80 million annually
- Current allocation of PIAC sales tax funding includes 35% for neighborhood projects, 15% for maintenance, and 50% for citywide projects.
- For FY 2016-17, Public Works received \$9.5 million for maintenance from these funds, which combined with other funds led to a maintenance budget of \$19.7 million, or approximately 22% of the annual need for maintenance (not including deferred maintenance)
- Re-authorization of the sales tax (required by 2018) will consider how best to leverage these dollars for maintenance needs

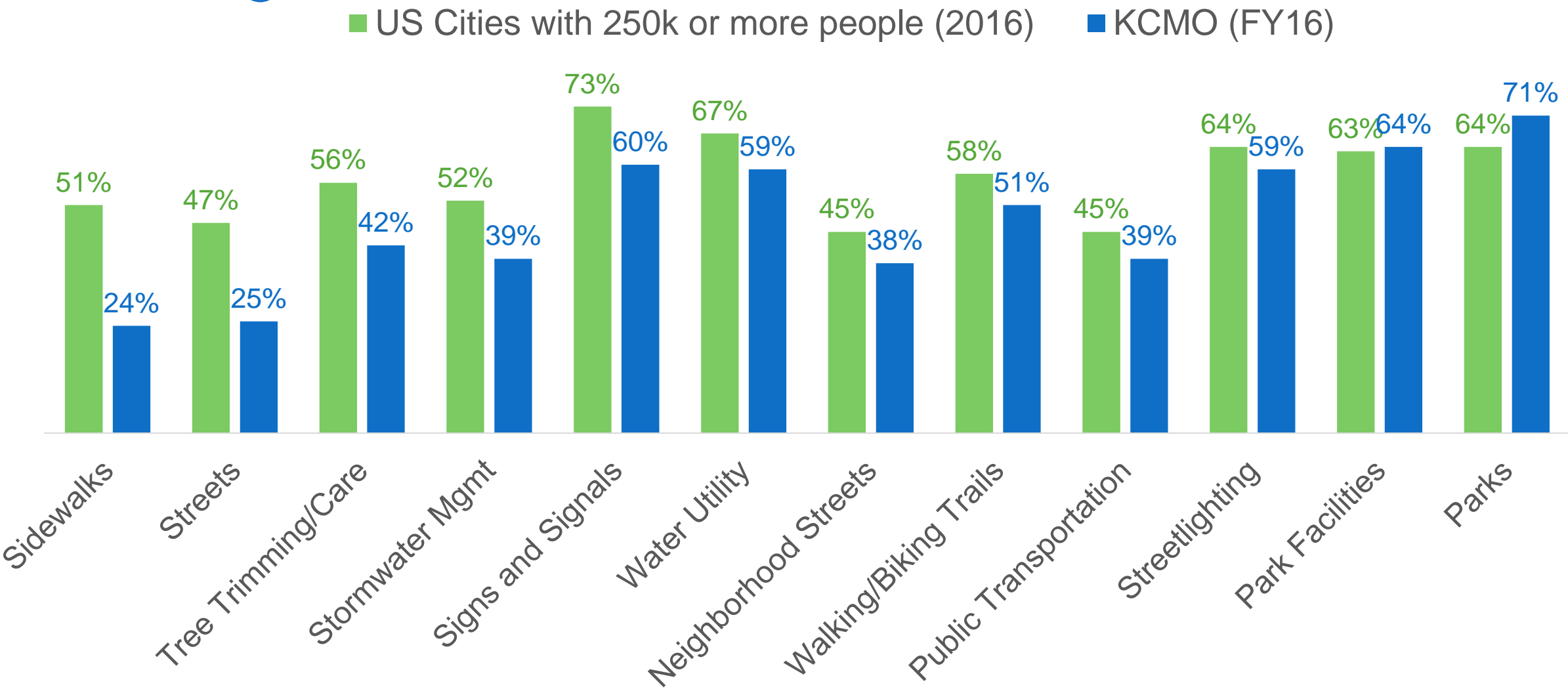
# Water Services Funding Task Force Update

- The KC Water Cost of Service Mayoral-appointed Task Force was established in April 2016 in response to rising water and sewer rates in KCMO. The Task Force's main objectives are:
  - To ensure that services provided by KC Water (water, wastewater and stormwater) are funded in a way that is fair, equitable and provides for the long-term financial stability of the utilities
  - To address the burden to customers of rising rates
- They have met 10 times since April 2016 and will meet 2 more times before issuing final recommendations.
- This task force is comprised of 15 members that represent all 6 council districts as well as different customer segments and interests (residential, commercial, wholesale, low-income, elected officials, environmental management, etc.)
- To date, the Task Force has:
  - Established community guiding principles for its decision making
  - Evaluated different rate structures and made recommendations around existing rate structure
  - Evaluated expense reductions and made recommendations on bad debt policy

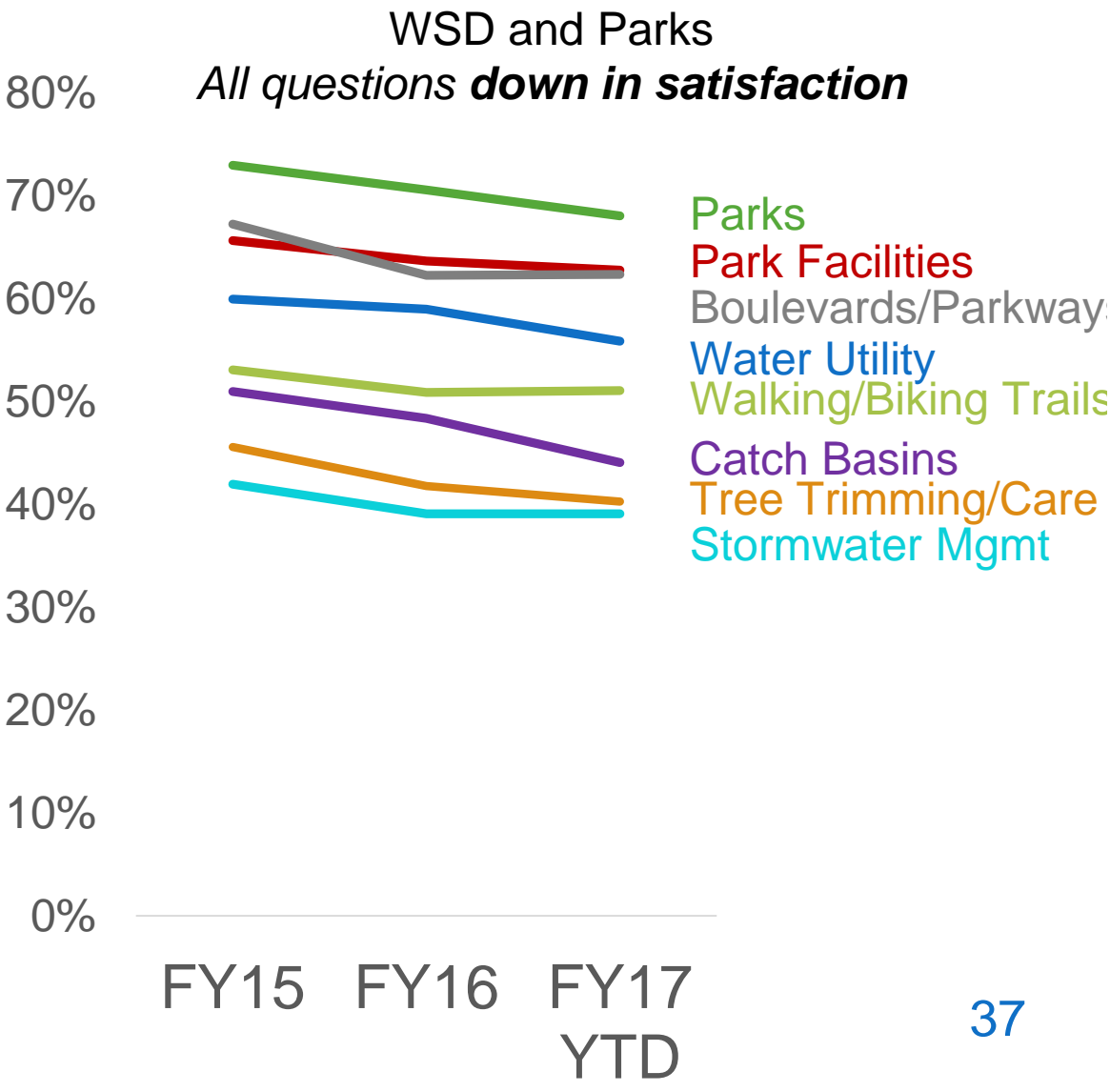
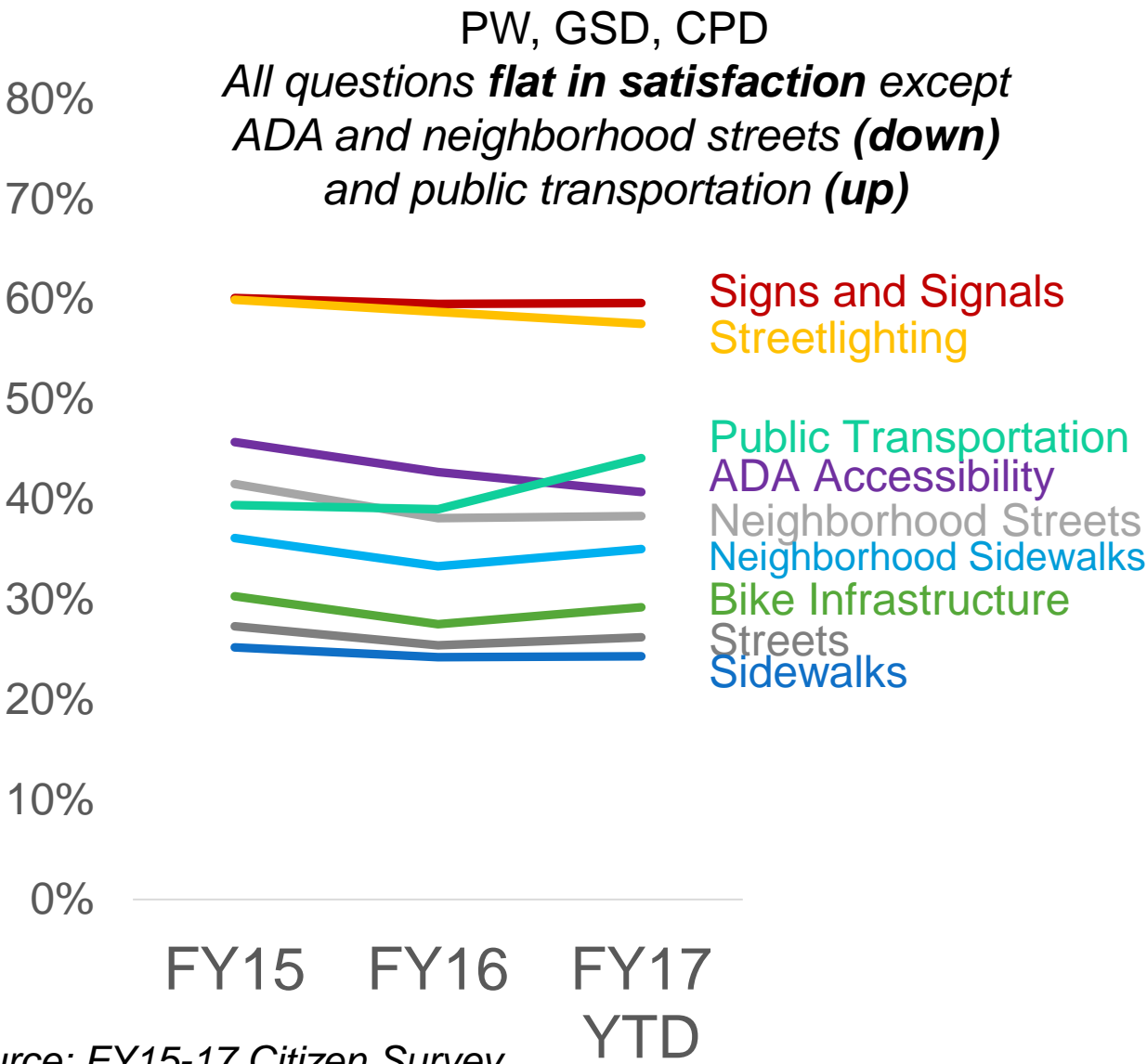
## Objective

Maintain a high-level of citizen satisfaction with regard to the repair and restoration of City infrastructure.

# Benchmarks for Infrastructure: Below Average



# Trends for Infrastructure: Down or Flat



Source: FY15-17 Citizen Survey

# Citizen Priorities: Importance-Satisfaction Ranking for Infrastructure (FY17 YTD)

I-S	Topic Area
1	Maintenance of city streets, sidewalks and infrastructure
2	Quality of police services
3	Quality of public transportation
4	Quality of neighborhood services
5	Quality of the City's stormwater runoff/stormwater management system
6	Quality of City water utilities
7	Quality of solid waste services
8	Effectiveness of city communication with the public
9	Quality of airport facilities
10	Quality of City parks and recreation programs and facilities
11	Quality of customer service you receive from city employees
12	Quality of fire and ambulance services
13	Quality of Health Department services
14	Quality of municipal court services
15	Quality of the city's 311 service

I-S	Topic Area
1	Maintenance of streets
2	Snow removal on residential streets
3	Condition of sidewalks
4	Maintenance of streets in YOUR neighborhood
5	Condition of sidewalks in YOUR neighborhood
6	On-street bicycle infrastructure
7	Accessibility of infrastructure for people with disabilities
8	Snow removal on major city streets
9	Adequacy of city street lighting
10	Maintenance of street signs and traffic signals

I-S	Topic Area
1	Tree trimming and tree care
2	Youth programs/activities
3	Walking and biking trails
4	Maintenance of city parks
5	Facilities in parks, including shelters and playgrounds

## Objective

Implement the City's American with Disabilities Act (ADA) plan to meet the Department of Justice's settlement agreement and ensure that all projects meet ADA standards.

# Implementation Progress - Buildings

- A total of 17 bid packages have been put together.
- An undetermined amount still remain.
- Bid packages are generally grouped by City Department.

## Bid Packages and Projects



KC Parks & Recreation



Convention & Entertainment Facilities



KC Water Services



General Services Department



Health Department



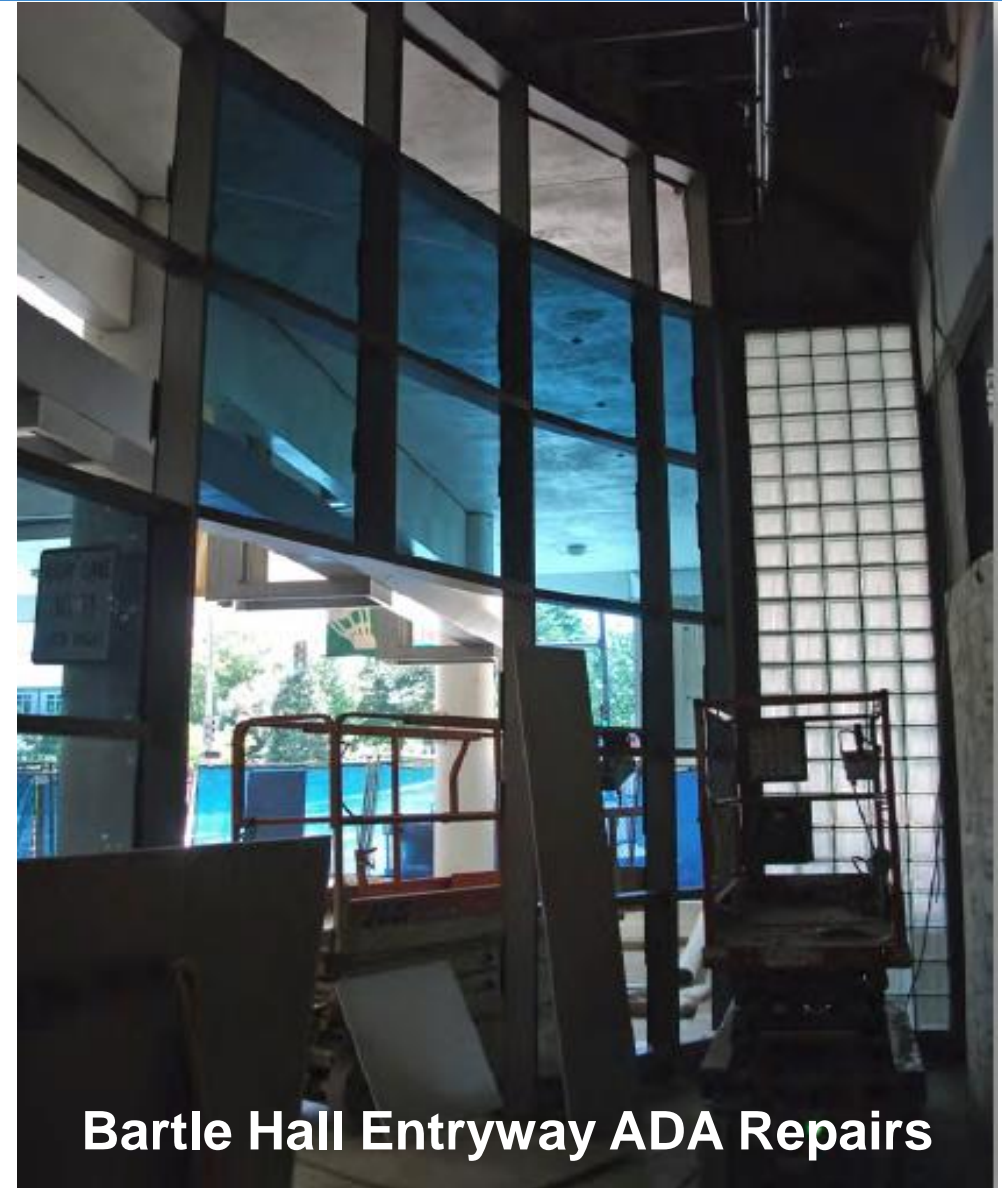
Aviation Department



# ADA Violation Resolution

- Approximately 20,000 ADA violations still remain to be corrected.
- Portion of GO Bond Question 3 (\$50M) to be used for ADA projects
- Transition Plan under development for submission to Justice Department detailing plans for remaining repairs
- Total cost of ADA improvements estimated to be \$100 million

*Source: ADA Division of City Manager's Office*



**Bartle Hall Entryway ADA Repairs**

# Implementation Progress - Curb Ramps

21,750

Corners with  
sidewalks leading  
to them

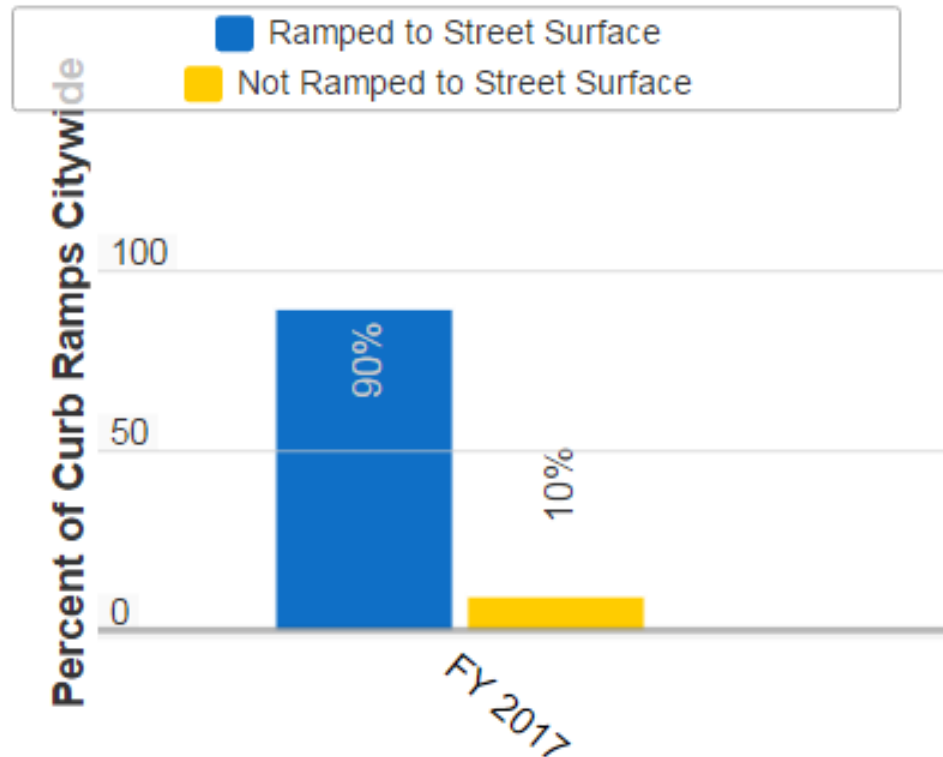
2,165

Corners not ramped  
(approximately)

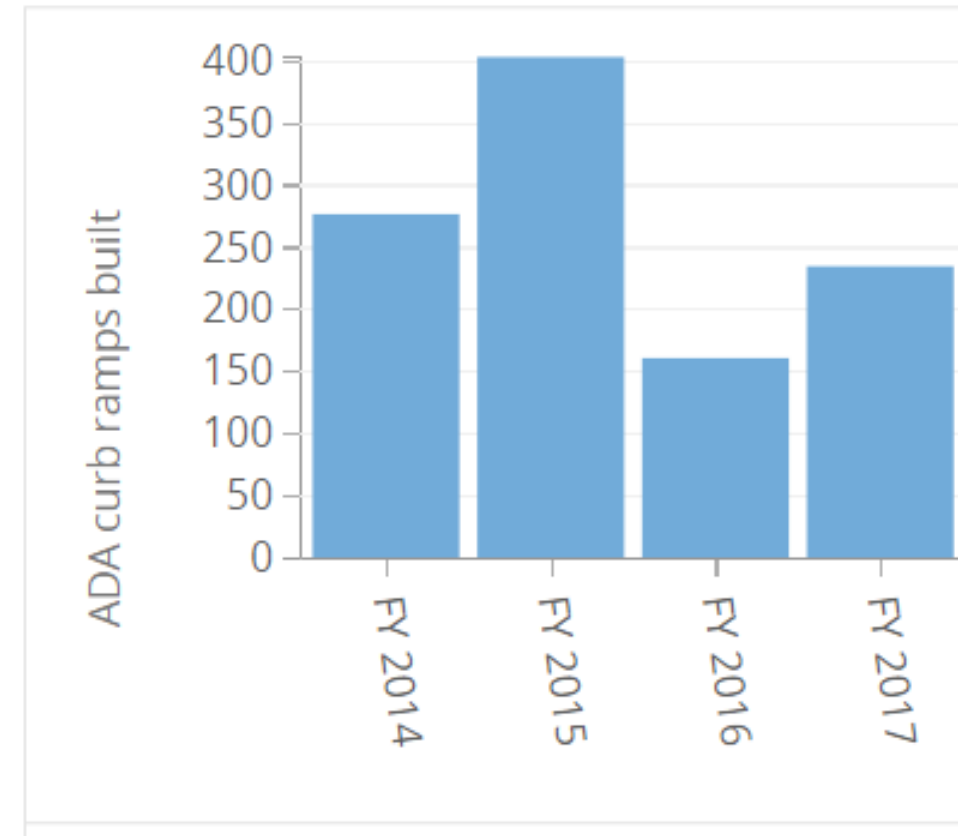
\$4,500

Average cost per  
corner to install a  
curb ramp

90% of curbs ramped overall



235 curbs ramped in FY17



# Next Steps

Among the projects remaining:

- City Hall
- Starlight Theatre
- Liberty Memorial
- Zoo



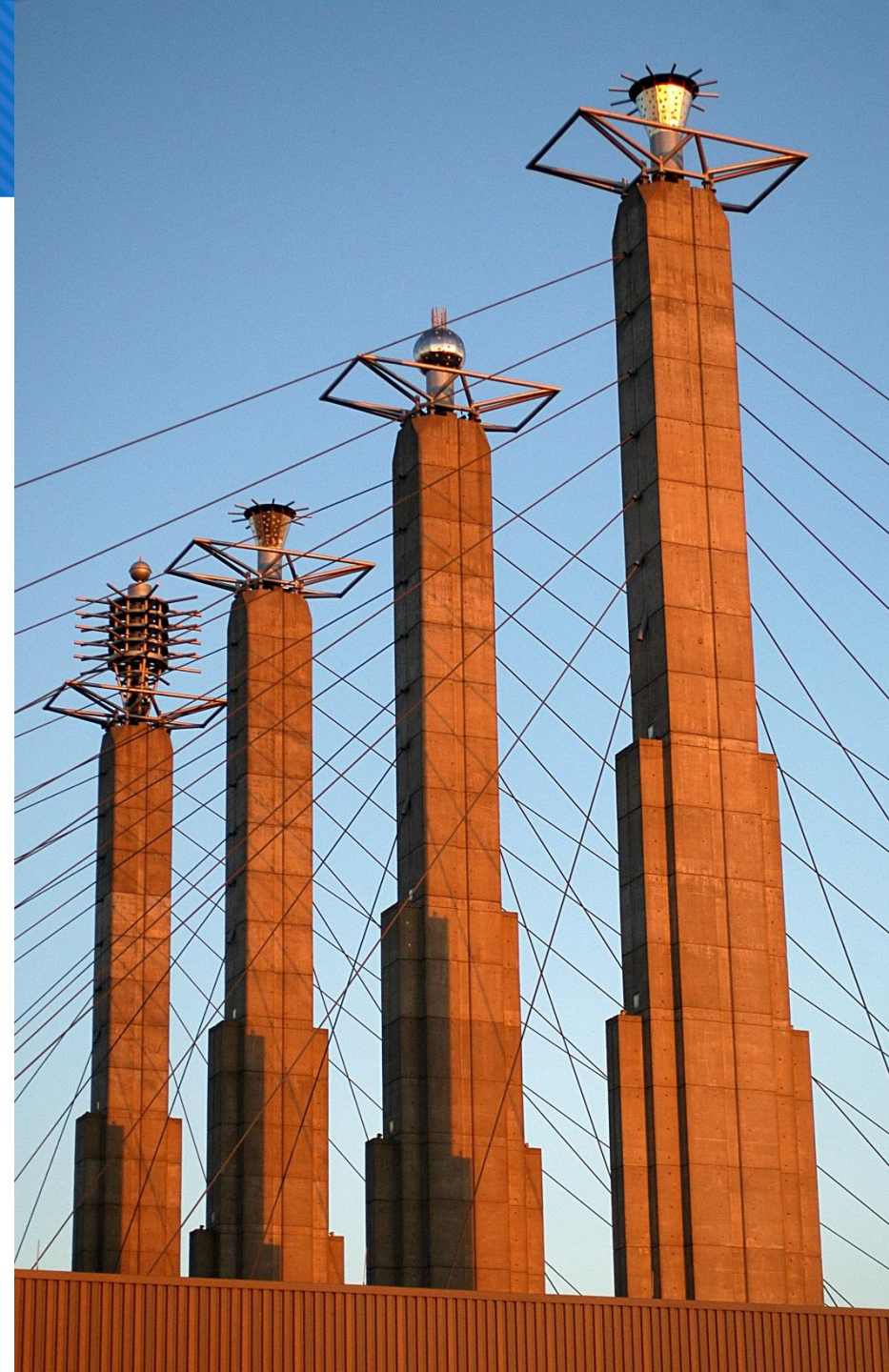
# Objective

Expand the public art program to a broader category of assets.



# Public Art Program Overview

- 43 installations of public art throughout all six Council districts
- Valued at more than \$20 million
- Doubled in value since the City's original investment





# Public Art – New and Upcoming Projects

## *Projects in Progress*

### **Streetcar One Percent for Art Project**

The final two Transporters sculptures, by Actual Size Artworks, will be installed on the east pavilion of Union Station during a public celebration planned for early spring. \$83,000 commission



### **KCPD North Patrol Station**

Frank Swanson is working on To Serve and Protect for the North Patrol Station located at 10610 NW Prairie View Road, which is planned to be installed May 2017. \$75,000 commission

### **Kansas City Municipal Division of the 16th Judicial Circuit Court**

Denise DiPiazso will be installing 16 Windows to the interior stairwell at Municipal Court located at 1101 Locust Street. \$30,000 commission

## *Upcoming Projects*

### **Urban Youth Baseball Academy**

Seeking to do a mural at the Urban Youth Academy located at Parade Park at Truman Road and the Paseo, in the 18th and Vine District. The estimated 1% for art budget is \$21,000.

### **Linwood Shopping Center**

The City is remodeling the Linwood Shopping Center at Linwood and Prospect. The estimated 1% for art budget for this project is \$170,000

### **Kansas City Museum**

The Parks and Recreation Department and International Architects Atelier are working on the architectural design phases and master planning of the Kansas City Museum located at 3218 Gladstone Boulevard for which the 1% for Art budget will be approximately \$120,000.

# Public Art – Upcoming Partnership Projects

## Workers Memorial

The Workers Memorial project was recently awarded to a team of artists of Shane Allbritton + Norman Lee to create *Rays of Remembrance*. Private funds will be used for this project with an estimated budget of \$250,000. *Rays of Remembrance* will be located in Water Works Park.



## Marlborough Livable Street Corridor

The Marlborough neighborhood has the distinction of being the first focus area for green infrastructure investment in Kansas City. Marlborough Community Coalition was awarded \$90,000 of PIAC funding for public art located near 82<sup>nd</sup> Terrace and Troost.

# Public Art Programming

The City is collaborating once again with the Downtown Council's Art in the Loop Foundation. This year the program will offer three different opportunities for artists:

- Art in City Market Park
- Art in the KC Public Central Library
- Art on the Streetcar Line

## Art in City Market Park

What: Summer temporary art program featuring the work of four visual artists with site-specific installations and several performance artists

Where: City Market Park

When: Performing artists will be present in the park on Wednesdays in May and June from 11:30 a.m. to 1:30 p.m.

Why: Provides local artists the opportunity to work in the public realm and the experience to move on to larger or permanent public art commissions. Because the art works are temporary, the artists are allowed a much larger range of designs and materials, which might be unsustainable if the works were permanent.





# Public Art Communications

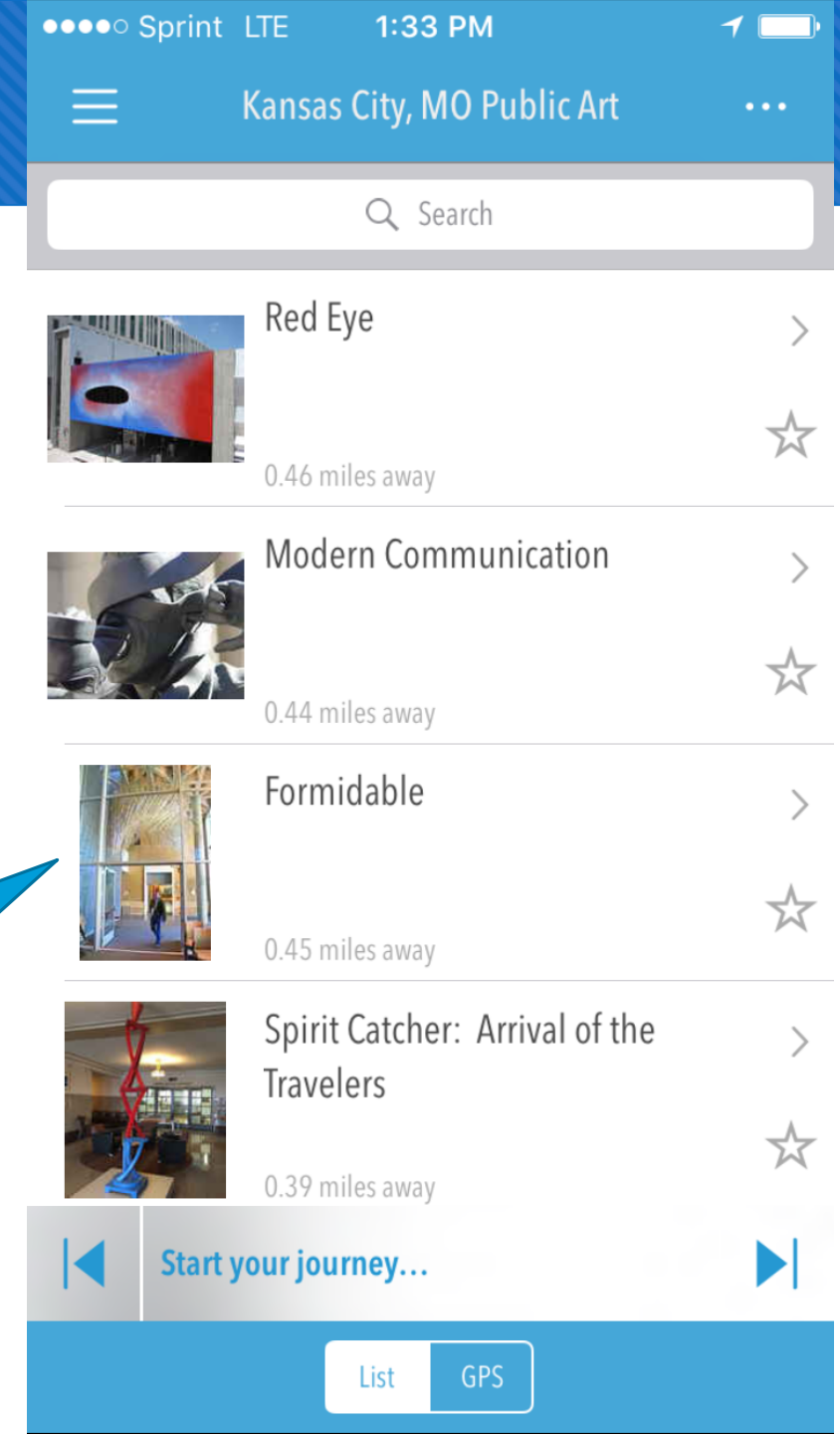
## Public Art Tour App

The City has developed a walking tour app of 15 of its beautiful downtown public artworks to entertain and educate citizens and tourists alike.

Search in the App Store for “Kansas City, MO Public Art” to download.

Click on a photo to find the title, artist, materials, location, and description of the artwork, as well as a map of where the user is in relation to the next exciting artwork to be found.

Users can click on “GPS” and “Get Directions” to show where the next stop is with accompanying audio that also explains exactly how to get there.



# Resilient and Sustainable Assets



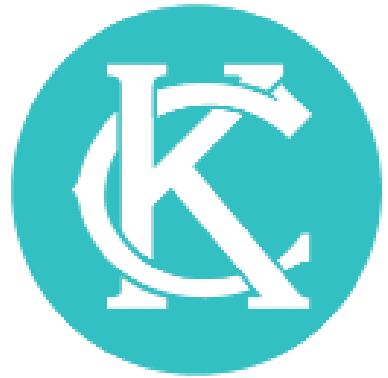
## Objective

Implement Kansas City's  
Overflow Control Program to  
meet City's federal consent  
decree requirements.

# Objective

Seek opportunities to reduce financial impacts of work required as part of the City's Overflow Control Program by proactively working with EPA to adjust the timeline for project completion, proposing additional green infrastructure solutions and seeking opportunities for supplemental funding sources.

# Kansas City's Smart Sewer Program



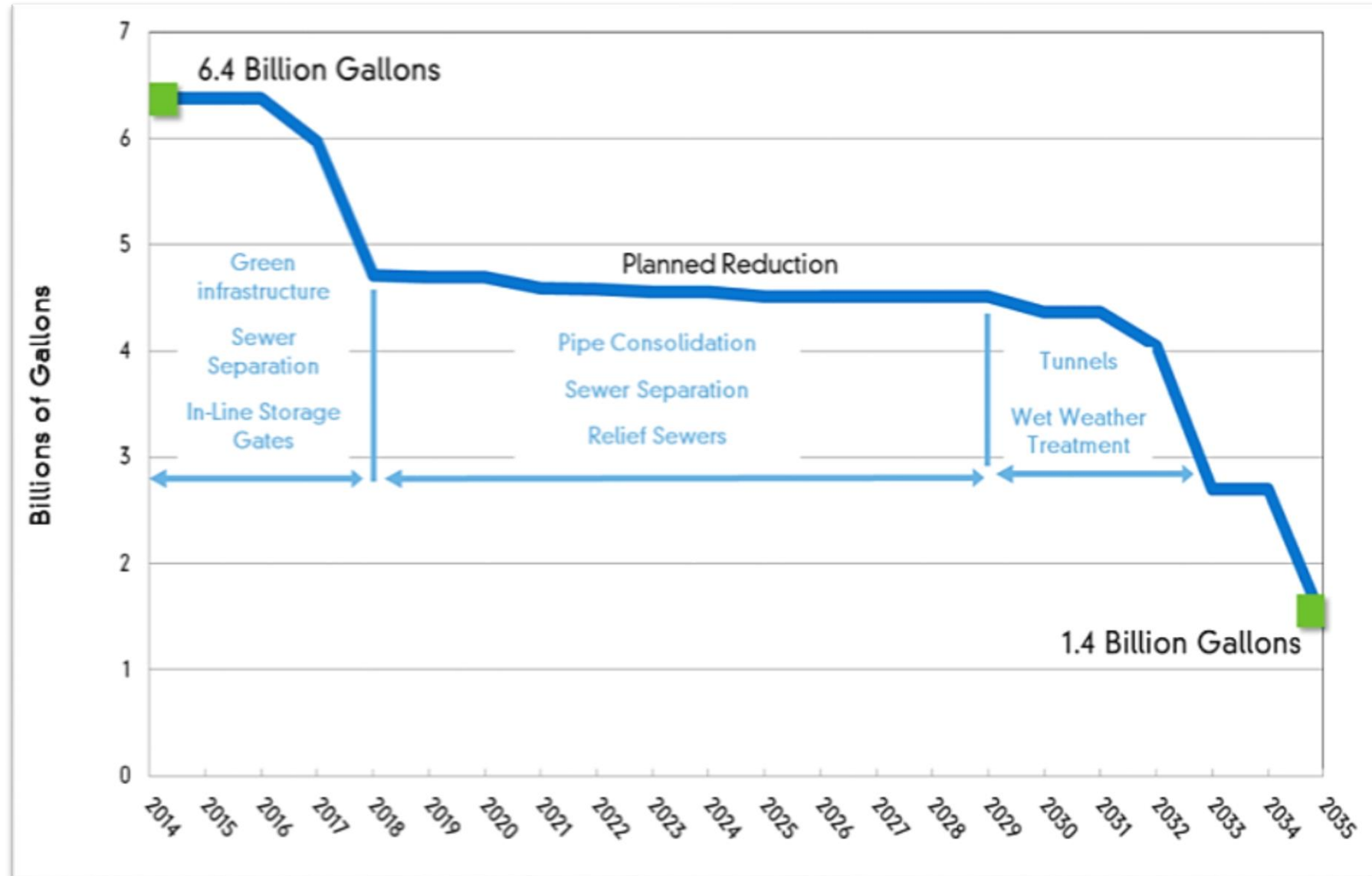
smartsewer

INNOVATION & INFRASTRUCTURE TO LAST A LIFETIME

Case 4:10-cv-00494-GAI Document 12 Filed 09/27/10 Page 1 of 55



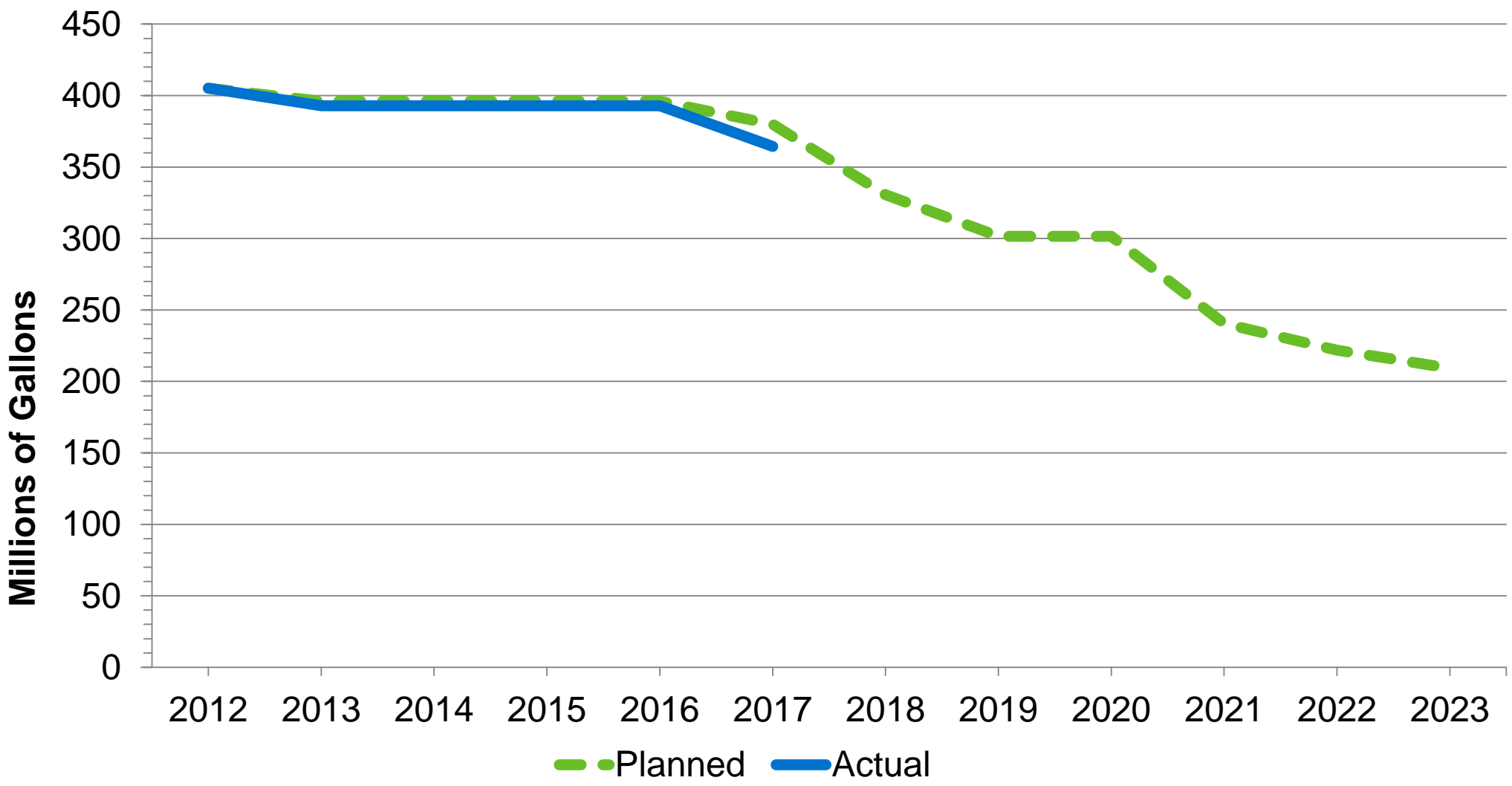
# Combined Sewer Overflow



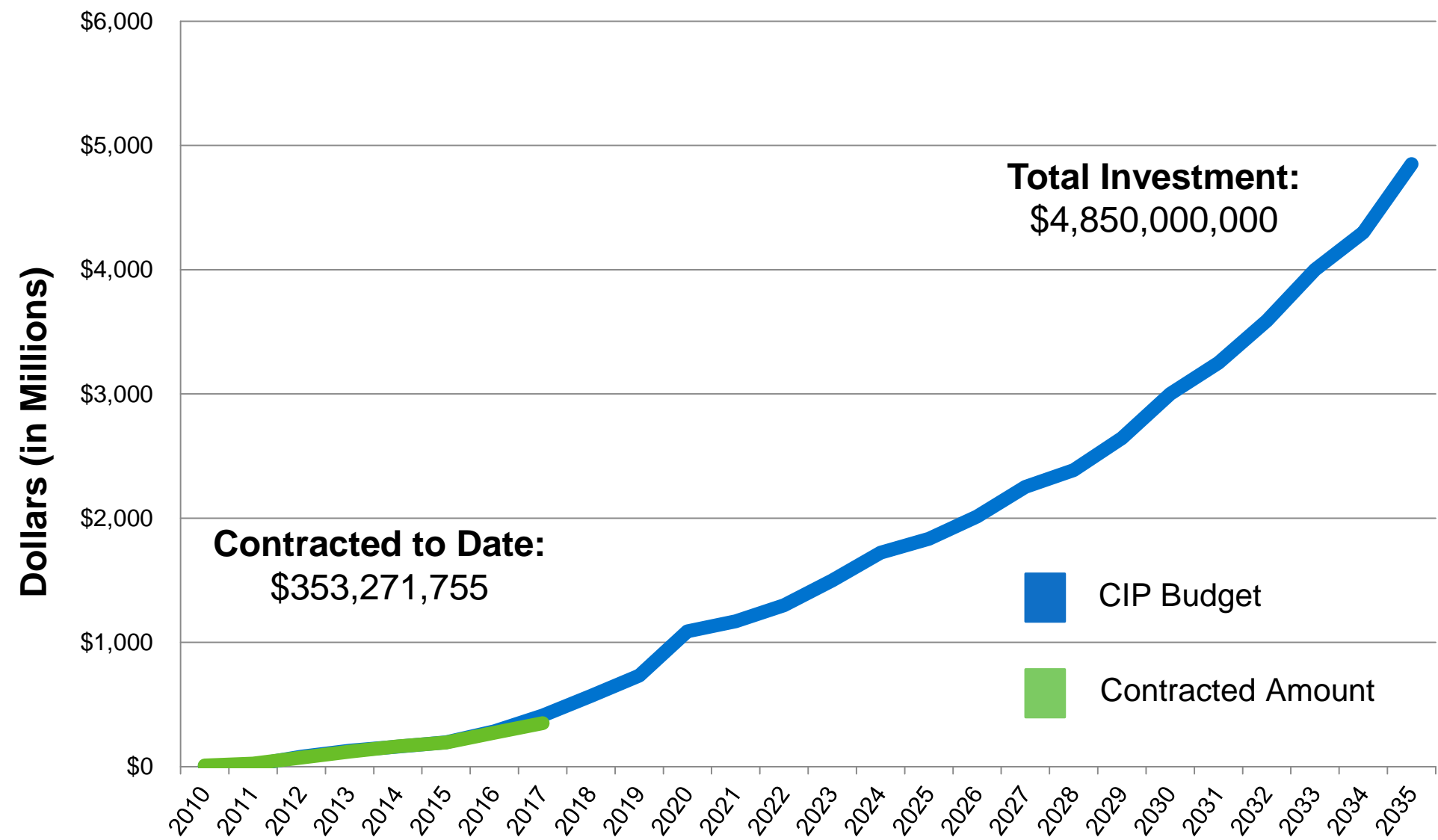


# Inflow and Infiltration 5-Year, 24-Hour Storm Event

**Inflow and Infiltration (MG)  
For 5-Year 24-Hour Storm Event**



# OCP Investment Progress to Date: 2010-2016



# Transparency

## YEAR IN REVIEW FISCAL YEAR 2017

### SMART SEWER CIP REPORT CARD//FY17

21  
PROJECTS

7 DESIGN  
PROJECTS

14 CONSTRUCTION  
PROJECTS

13

ON OR AHEAD OF SCHEDULE



2

ONE MONTH OR LESS BEHIND SCHEDULE



6

AT LEAST TWO MONTHS BEHIND SCHEDULE



### DESIGN

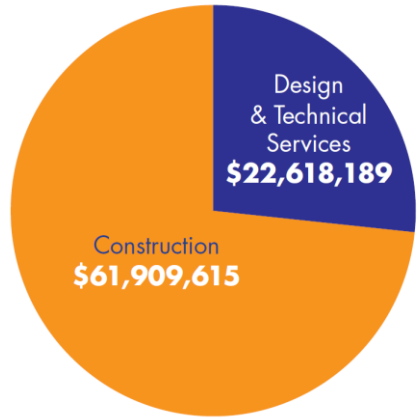
On or Ahead of Schedule ☒  
 ≥1 Month Behind Published Schedule ☐  
 At Least 2 Months Behind Schedule ☐

Project	Design Professional	Planned Date Actual Date	Estimated Actual	MBE/WBE Goal	Scope
Pump Station Upgrade: Round Grove - Conceptual Design	AECOM	May 2016 May 2016	\$1,100,000 \$311,285	15%/10%	→
Neighborhood Sewer Rehabilitation: Northeast Industrial District	Larkin Lamp Ryneason	September 2016 February 2016	\$1,600,000 \$1,840,000	15%/10%	↑
Neighborhood Sewer Rehabilitation: Lower Blue River	CH2M	September 2016 October 2016	\$2,540,000 TBD	15%/10%	→
Blue River Watershed Management Plan: Year 1 Integrated Planning	TBD	March 2017 March 2017	\$100,000 TBD	TBD/TBD	→
Dry Weather Sewer Line: Outfall 056	TBD	March 2017 February 2017	\$45,000 TBD	SLBE- WSDEPS	↑
Neighborhood Sewer Rehabilitation: Turkey Creek/Central Industrial District	Block & Veatch	April 2017 October 2016	\$2,540,000 TBD	15%/10%	→
Blue River Trailhead: Supplemental Environmental Project	HG Consult	N/A December 2016	\$100,000 TBD	SLBE- WSDEPS	→
Program Services	BMCD	N/A December 2016	\$9,000,000 TBD	15%/10%	→

### CONSTRUCTION

Project	Contractor	Planned Date Actual Date	Estimated Actual	MBE/WBE Goal	Scope
City-Wide Sewer Manhole Stabilization Within Waterways	Kissick	May 2015 June 2016	\$4,000,000 \$6,258,649	11%/6%	↑
Blue River Central I/I Reduction Areas 1 & 2	TBD	March 2016 February 2017	\$10,180,000 TBD	11%/4%	→
Blue River North I/I Reduction	TBD	August 2016 February 2017	\$3,880,000 TBD	10%/5%	↑
Sewer Separation at Diversion Structure 063 & 099 & Water Main Replacement - Phase 1	Kissick	August 2016 June 2016	\$14,800,000 \$15,418,916	14%/5%	↑
Blue River South I/I Reduction Area 3	Leath & Sons	October 2016 December 2016	\$3,070,000 \$3,474,397	10%/5%	→
Small Sewer Rehabilitation: Town Fork Creek	Havens Construction	November 2016 June 2016	\$14,350,000 \$13,244,316	11%/6%	→
Sewer Separation at Diversion Structure 063 & 099 & Water Main Replacement - Phase 2	Blue Nile	December 2016 January 2017	\$8,050,000 \$6,308,758	13%/6%	→
Sewer Separation at Outfall 066 & 067	TBD	December 2016 June 2017	\$25,700,000 TBD	TBD/TBD	→
Relief Sewer at Diversion Structure 068	TBD	December 2016 September 2017	\$5,650,000 TBD	TBD/TBD	↑
In-Line Storage: OK Creek Gates	TBD	February 2017 February 2017	\$4,610,000 TBD	12%/6%	→
Line Creek/Rock Creek I/I Reduction Areas 1 & 2	TBD	April 2017 March 2017	\$10,290,000 TBD	11%/4%	→
Pump Station & In-Line Storage: Gooseneck Arch Sewer	TBD	April 2017 June 2017	\$20,000,000 TBD	TBD/TBD	↑
Blue River South I/I Reduction Area 5 - Phase 1	Project moved to Fiscal Year 2018 to be combined with area 4				→

# Smart Sewer Commitment

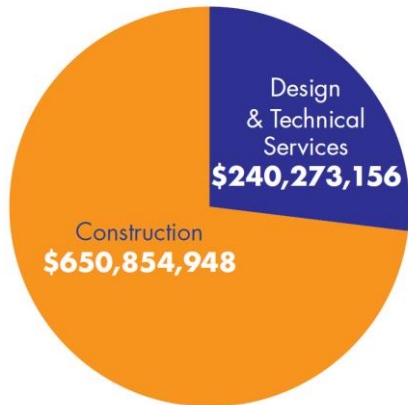


**\$84,527,804**  
PLANNED INVESTMENT



**1,600+**  
JOBS

**FY 2018**

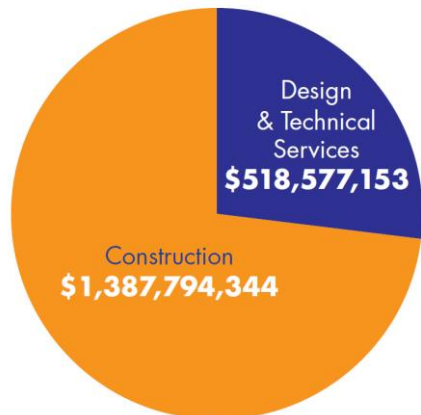


**\$891,128,104**  
PLANNED INVESTMENT



**17,200+**  
JOBS

**FY 2018-2022**



**\$1,906,371,497**  
PLANNED INVESTMENT



**36,800+**  
JOBS

**FY 2018-2027**

# Keep Out the Rain

- 15,657,596 gallons of rain water removed
- Cost effectiveness: \$.55/gallon
- Homes reached: 13,940
- Participation: 52% (full evaluation)
- Resident Satisfaction: 99% Satisfied



HELP REDUCE SEWER OVERFLOWS  
IN OUR COMMUNITY

Sign Up Today - It's **FREE**

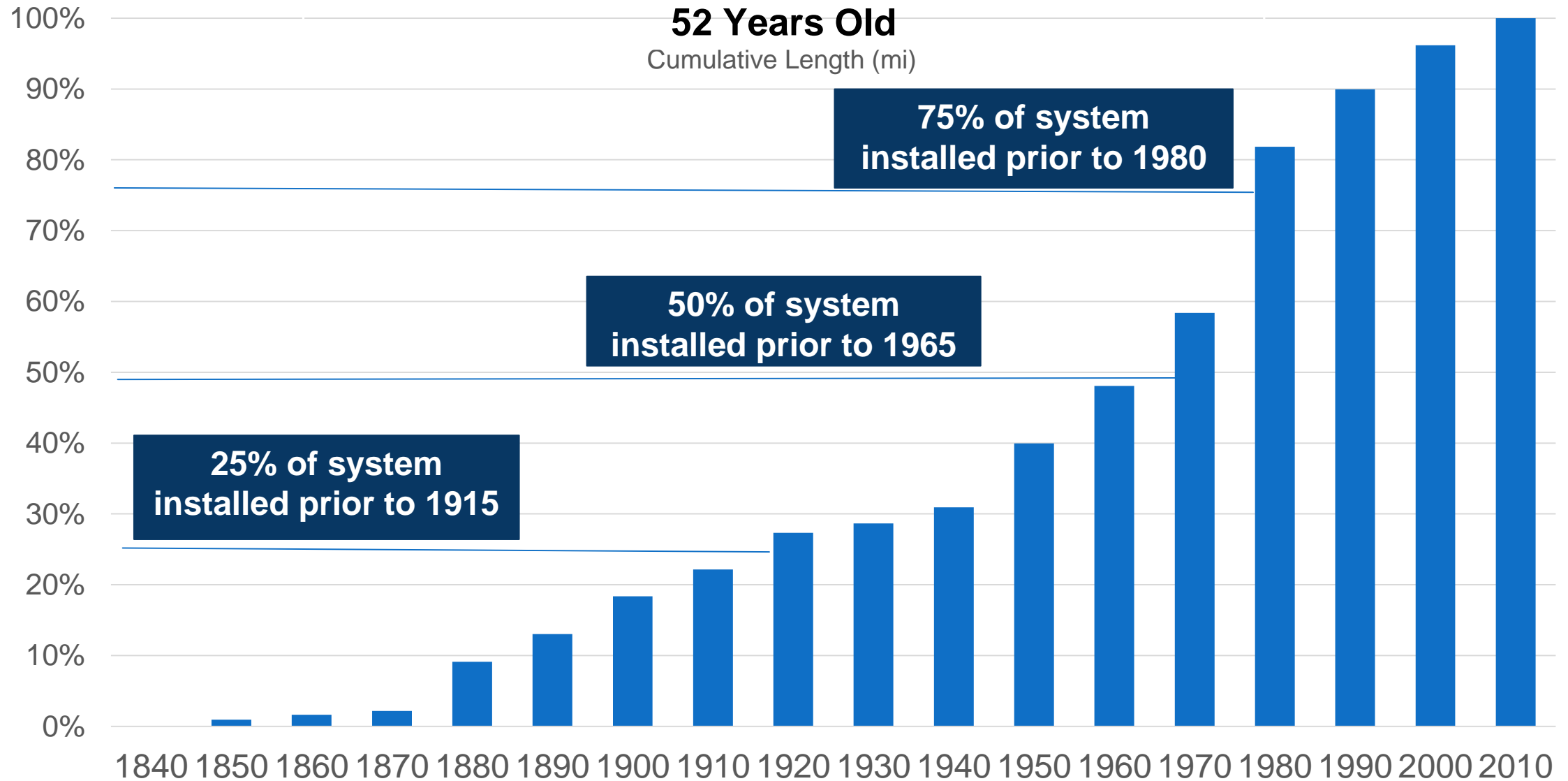


# Sewer Main Rehabilitation Program

**Average age of Wastewater Collection System:**

**52 Years Old**

Cumulative Length (mi)



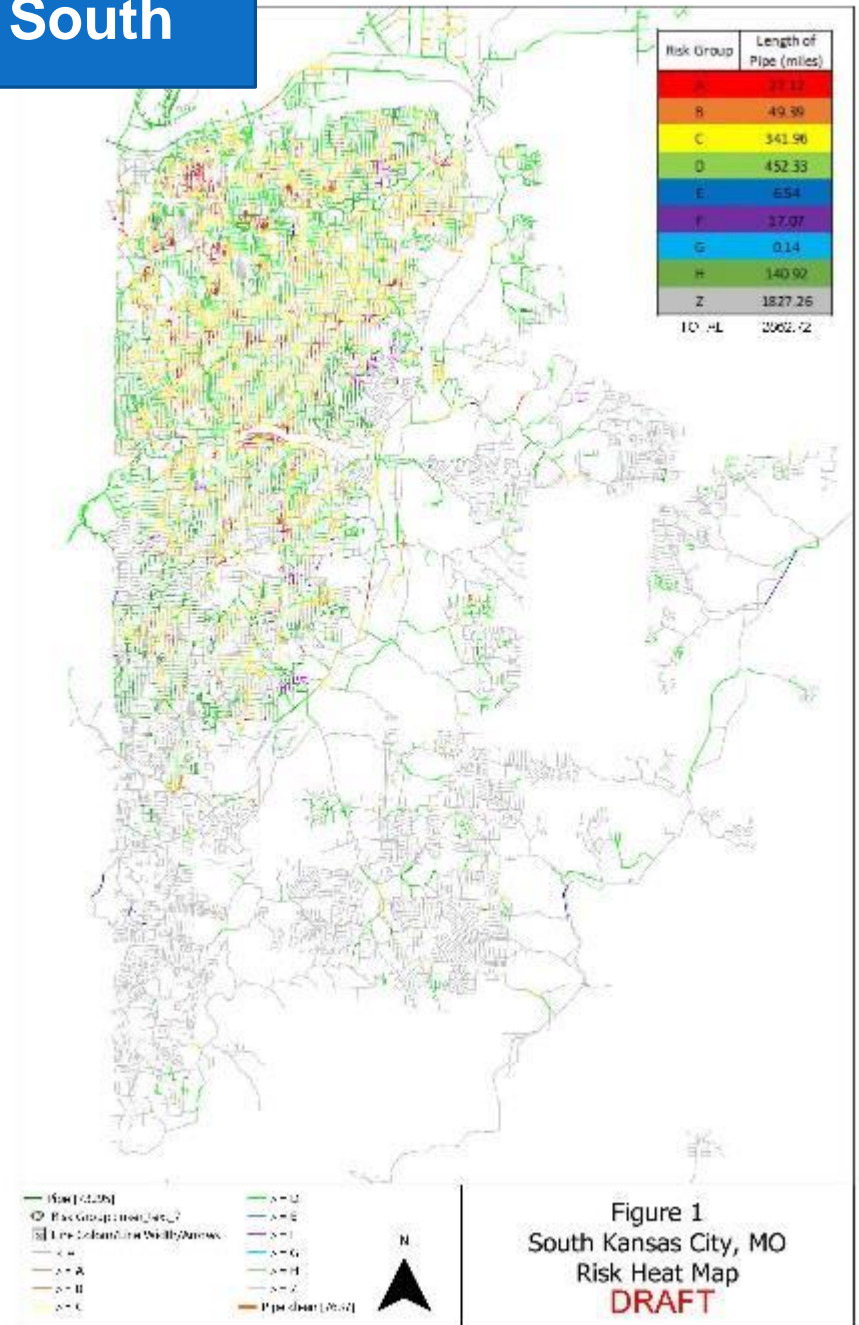
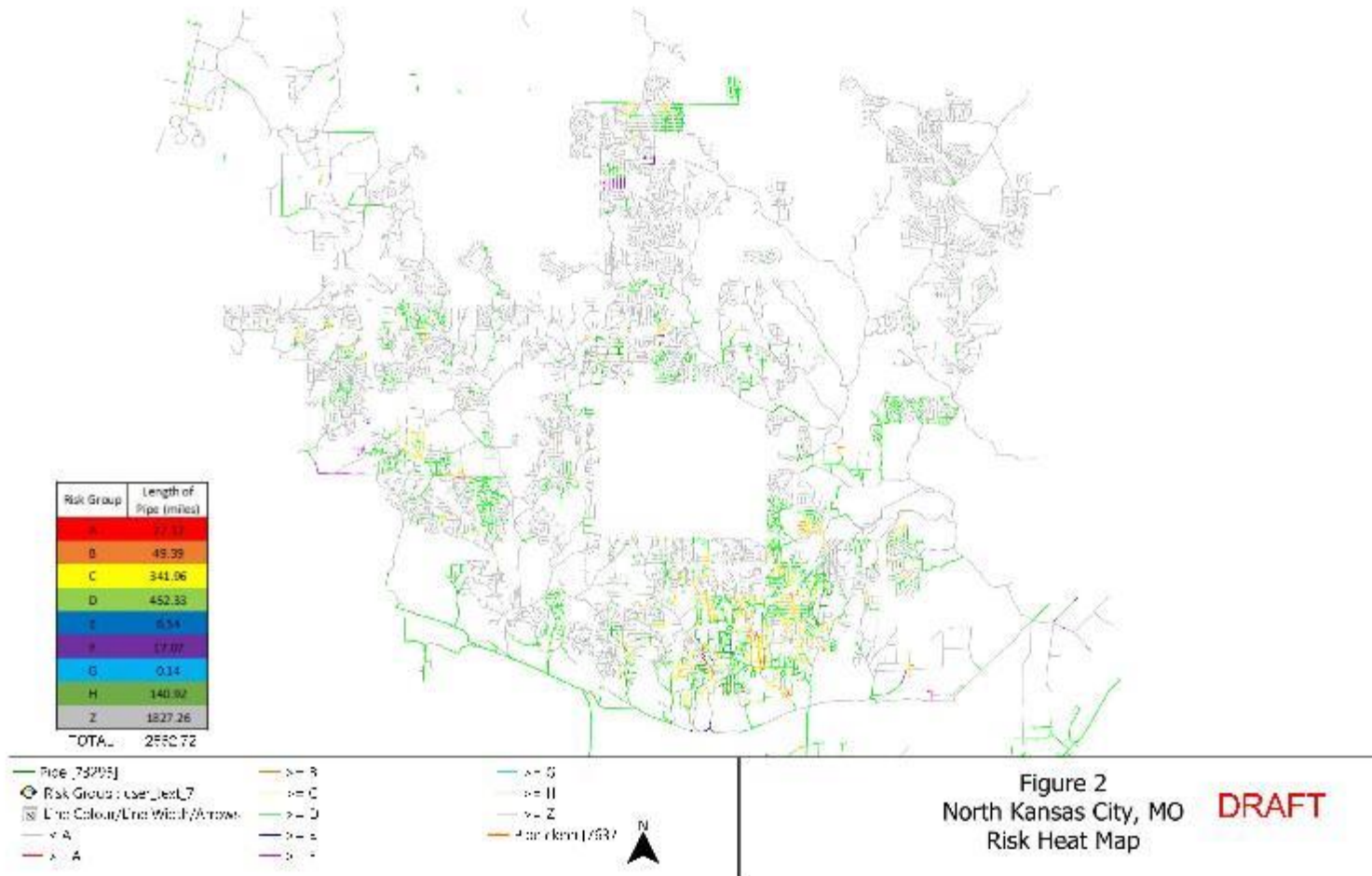
# Wastewater Master Plan: Status

- 16 Technical Memoranda Developed
- Capital Projects, Costs and Schedules for Wastewater Utility (Includes Smart Sewer)
- Reviewing CMOM Updates and Pipeline Inspection/Repair Prioritizations
- Hydraulic Model, Communication and SCADA Recommendations: WSD Review
- Complete Document and Final Presentation: June 2017

# Sewer Main Rehabilitation Program

North

South



# Objective

Implement the Envision Sustainable in all infrastructure planning and projects to maximize sustainable development solutions.

# Envision Platinum Rating: KC Streetcar

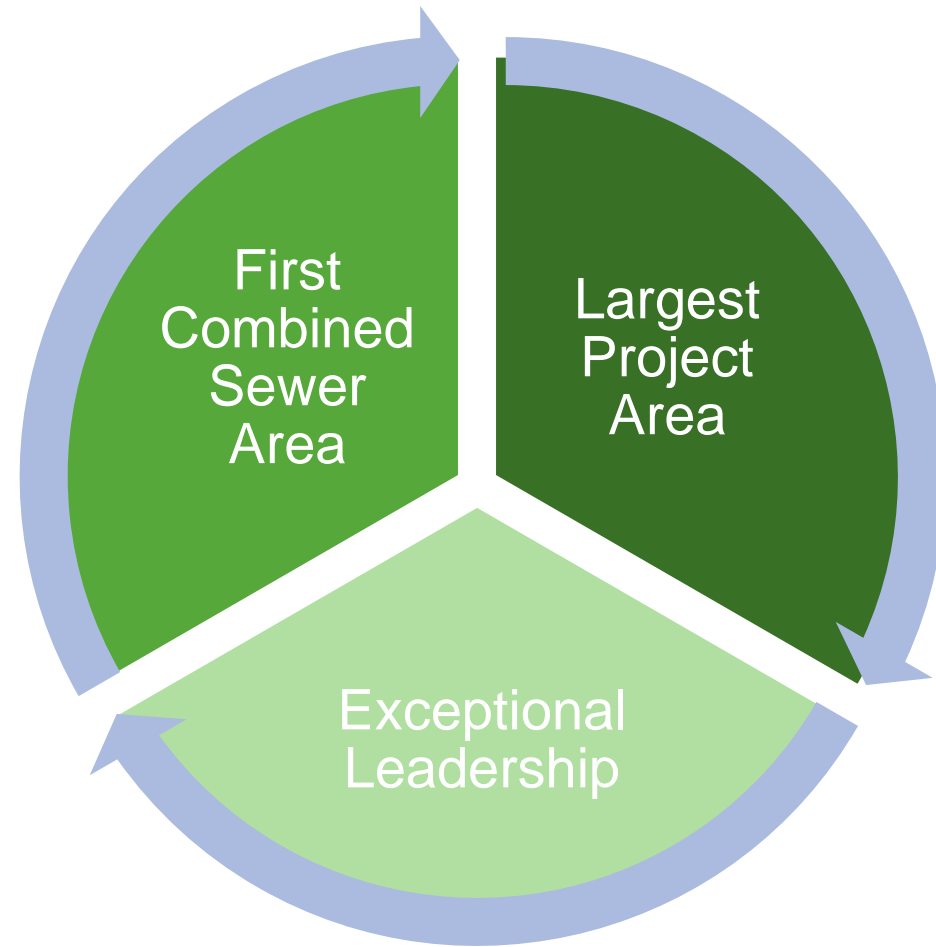
- The KC Streetcar earned **the Envision Platinum award** for sustainable infrastructure, becoming the first transit project to receive an ISI Envision rating. Envision categories with the highest scores include Quality of Life and Resource Allocation:
  - **Quality of Life**
    - The KC Streetcar provides an alternative mode of transportation that improves mobility and accessibility for a heavily developed urban area, within walking distance to a mix of commercial, office and residential uses.
    - Designers took care to enhance public spaces while preserving urban aesthetics and neighborhood character to further improve the overall quality of life.
  - **Resource Allocation**
    - All 845 tons of steel used for the streetcar tracks were made with recycled metal scrap
    - Approximately 47% of Singleton Yard contains recycled content
    - 90% of the Singleton Yard construction waste was diverted from the landfill.
    - Concrete removed during construction (from sidewalks, driveways and pavement) was crushed into recycled aggregate and reused in project construction, and all scrap metal was recycled.





# Envision Platinum Award:

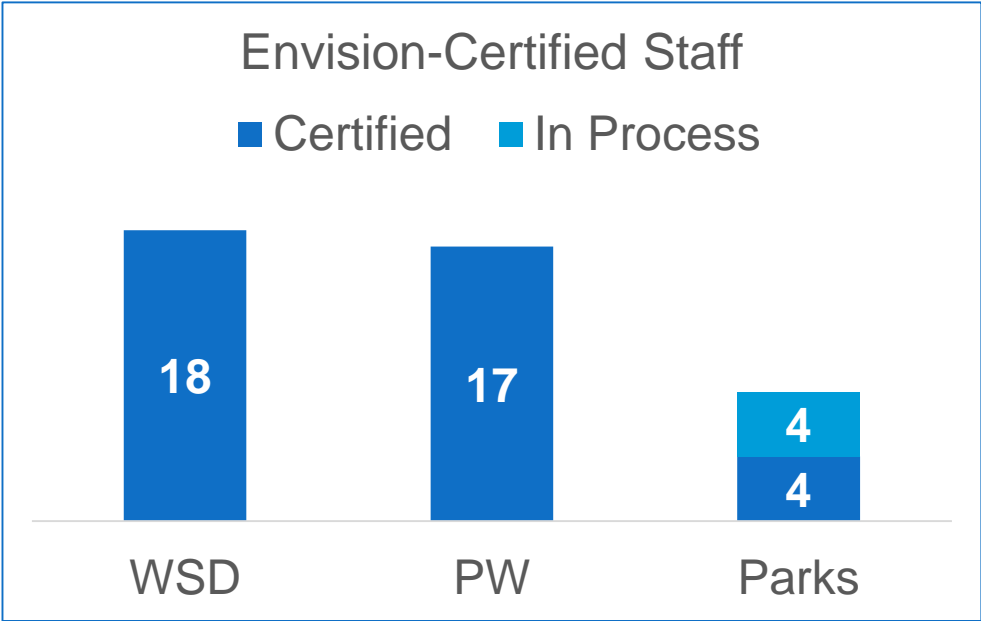
## *Middle Blue River Basin Green Infrastructure Project*



# Integration of Envision Principles into Capital Projects



Public Works' and Water Services' standard RFQ/P language includes reference to the Envision rating system and direction to incorporate and highlight sustainability/efficiency principles into proposals.



Scope of work can include the following Envision goals and design criteria depending on the project:

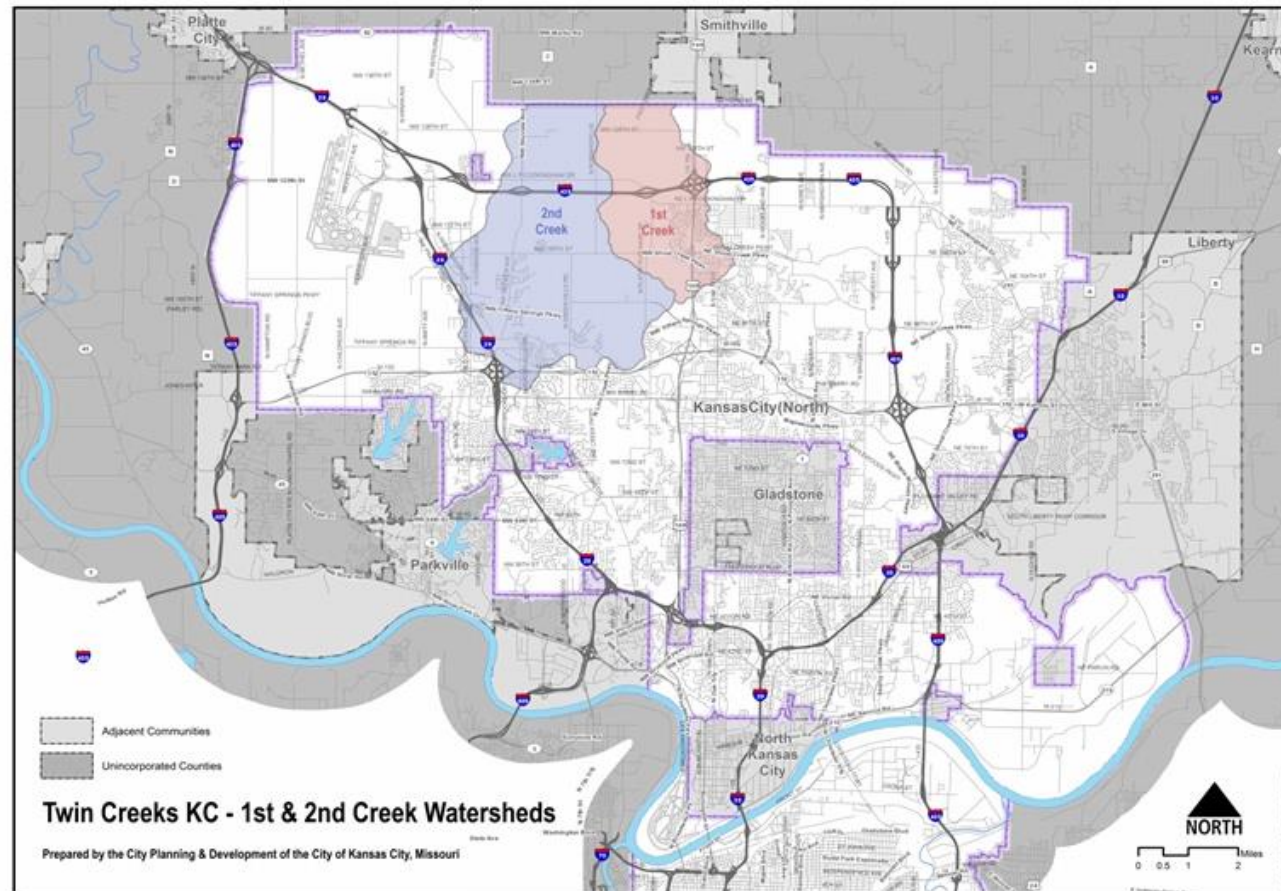
- Quality of Life
  - Ex. improving community quality of life
- Leadership
  - Ex. providing for stakeholder involvement; improving infrastructure integration; planning for long-term monitoring and maintenance
- Resource Allocation
  - Ex. using regional materials and renewable energy; protecting fresh water availability
- Natural World
  - Ex. avoiding unsuitable development on steep slopes; preserving greenfields; managing stormwater
- Climate and Risk
  - Ex. avoiding vulnerabilities

## Objective

Refine and implement strategic infrastructure investments in the Twin Creeks and other growth areas that capitalize on natural features, promote unique development patterns, build civic space, and promote sustainable design and construction.

# Twin Creeks Context

## Emerging Development Areas – Twin Creeks





# Twin Creeks – Growth Recommendations

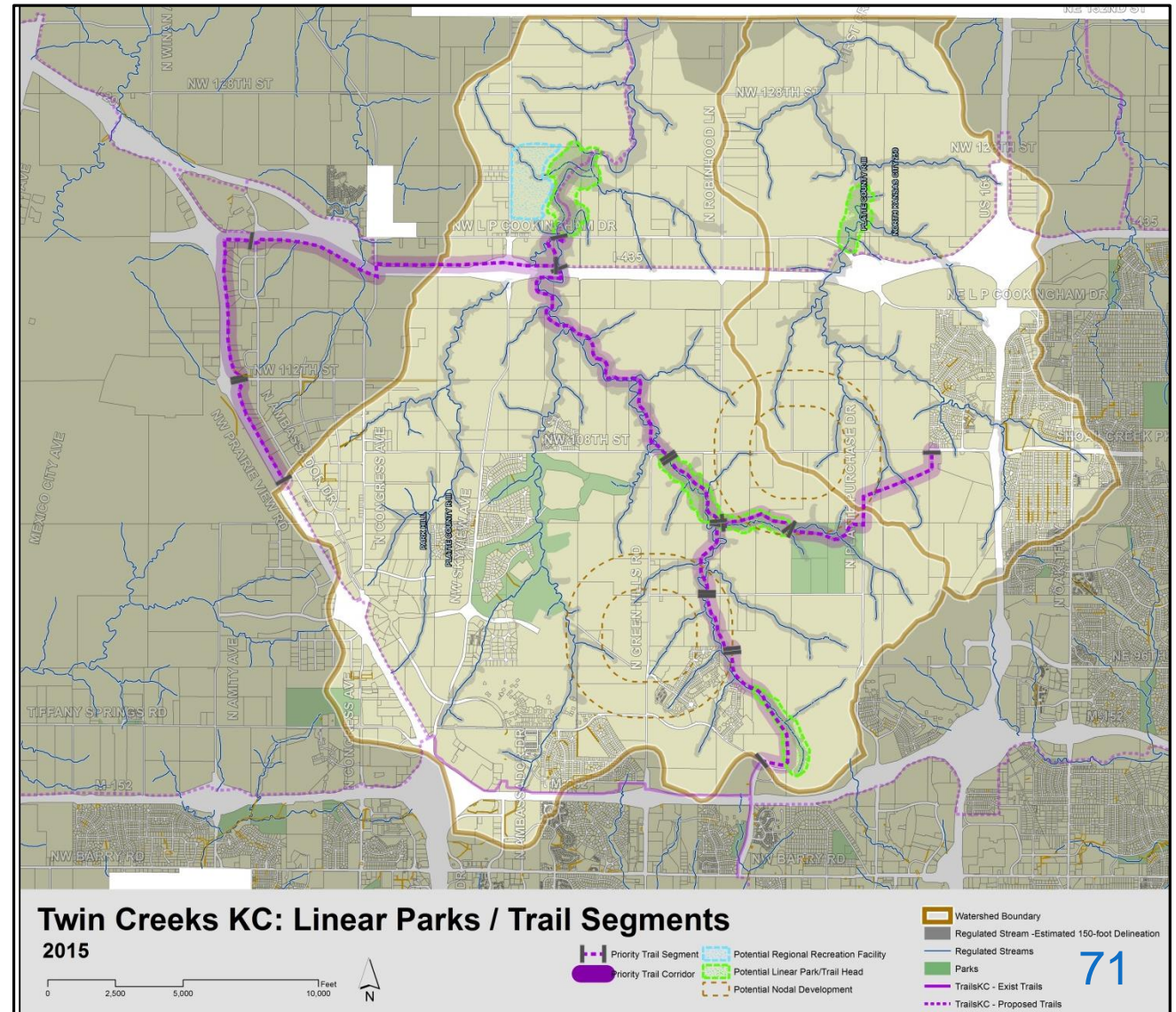
- A important goal of the City within the Twin Creeks Area is to implement strategic infrastructure investments that capitalize on natural features, promote unique development patterns, build civic space, and promote sustainable design and construction.





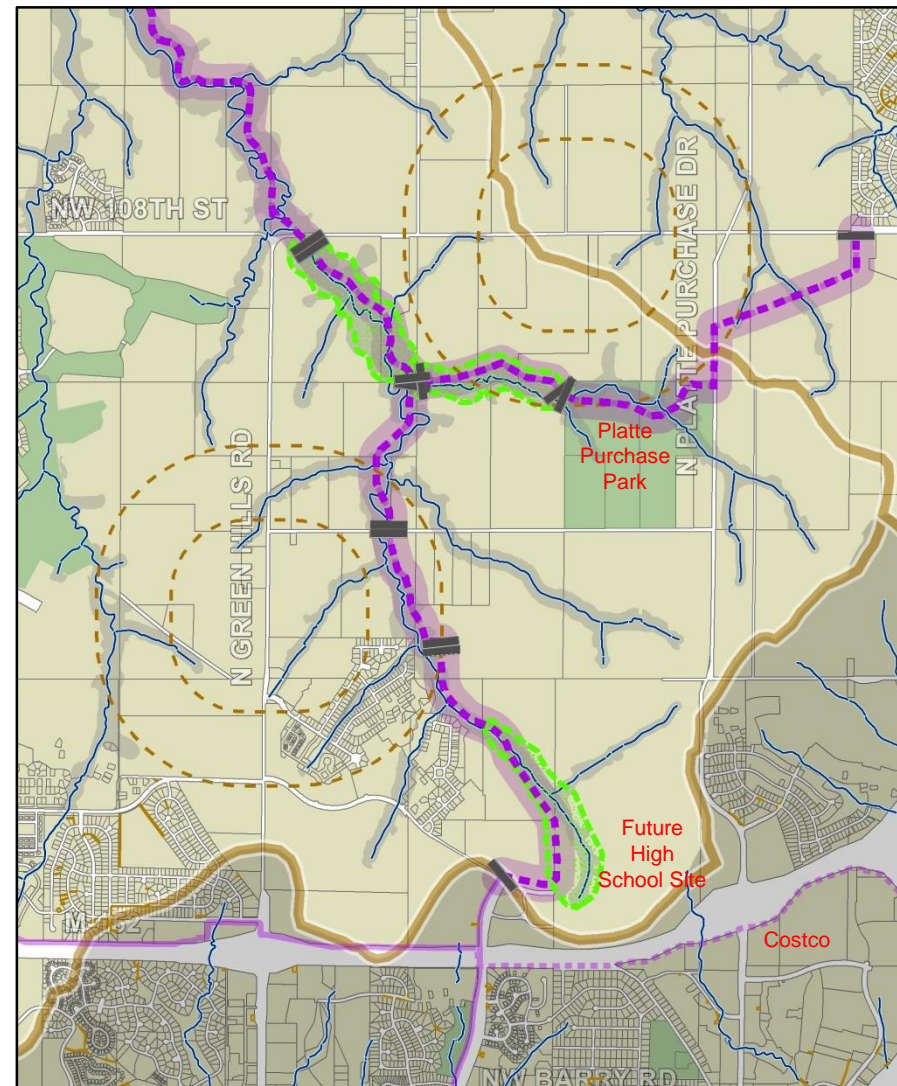
# Capitalizing on Natural Features

- Construction of a trails along streambanks to provide recreational opportunities.
- Provide baseline information from Water Services at a more refined level than current floodplain regulations to protect waterways and enhance water quality.
- Prioritization of future public investments south of 108th Street to promote an efficient development pattern.



# Promoting Unique Development Patterns

- The City of Kansas City is in the process of building a trail that will travel in the stream setback of Second Creek, similar to what is being suggested within the Twin Creeks Taskforce report.
- The funding for this project is multi-jurisdictional with funds coming from the following sources:
  - \$1 million commitment from Platte County Parks tax
  - \$1 million from PIAC
  - \$1 million from Platte Purchase redevelopment district
  - \$150k from MDNR recreational trails program





# Promoting Unique Development Patterns

The Twin Creeks Task Force and the Bloomberg Report discuss developing the area in an orderly fashion starting at the southeastern portion of the area and progressing to the northwest.

Ultimately, the area will include two focused mixed use development nodes at which neighborhood level development will occur that are integrated into the Twin Creeks trail network.

Characteristics of these development areas may include creation of specific standards relating to:

*Street Frontage*

*Building Height*

*Development Density*

*Sidewalk Uses*

*Signage*

*Lighting*

*Parking Orientation*

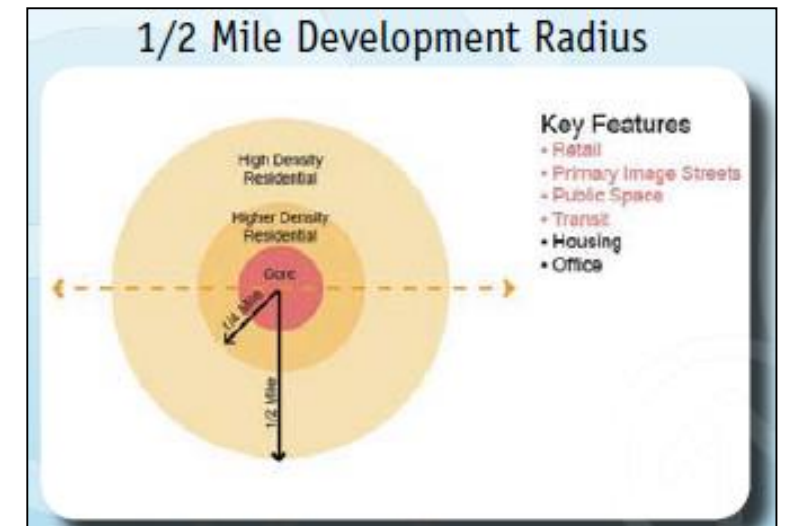
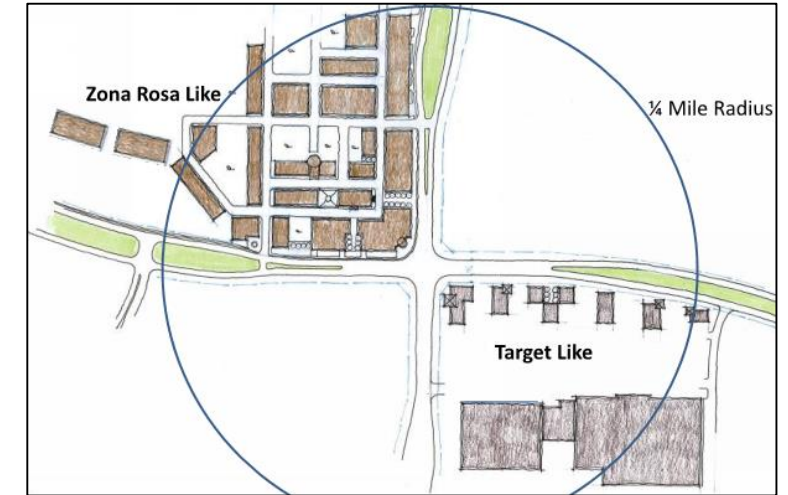
*Land Uses*

*Landscaping*

*Connectivity*

*Building Facades*

*Streets (e.g., width, materials)*



# Promoting Sustainable Design and Construction

- A result of the Twin Creeks process is the geomorphological study that is being conducted by the Water Services Department for the area. This model will provide detailed stream information at greater detail than FEMA flood plain regulations that will be made available to developers and will allow the City to model stormwater impacts at the incremental level.
- Benefits of this model include:
  - Having more comprehensive data, models, and GIS tools
  - Locate more risk and being able to either avoid or resolve it
  - Correct and align FEMA and local flows, lowering flows and floodplains
  - Determine erosive and meander hazards
  - Protect stream corridors and natural resources
  - Avoid one-size-fits-all requirements / avoid excessive regulation
  - Reduce the engineering and cost for development
  - Better final products, less risk, more value.





# Citywide Greenfield Development Approach

- The development prototypes being piloted in the Twin Creeks area have the potential to be implemented in other greenfield locations across the city.

Limit Residential Sprawl



Promote Walkability



Capitalize on Natural Features





## Objective

Develop and implement a city-wide climate resiliency plan and protocols to safeguard and restore critical city infrastructure in the event of a natural disaster.

## Objective

Update the City's Climate Protection Plan to include Envision Sustainable practices and to enhance participation.

# Overview of Climate Resilience Planning



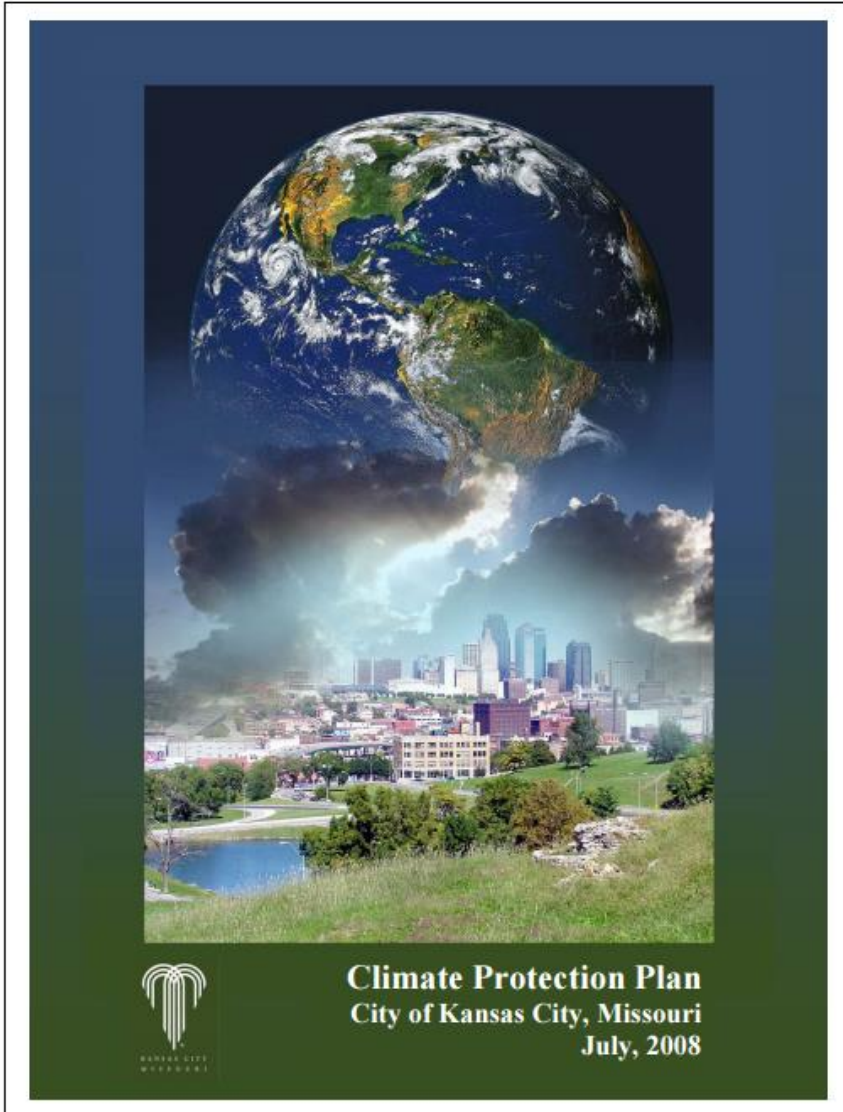
Partners for Places grants are issued twice annually in a partnership between the Funders' Network and the Urban Sustainability Directors Network.

They match 1:1 funding from local place-based foundations to collaborate with local government sustainability directors on priority areas (e.g. development of neighborhood-focused climate resilience plans)

**Next step for KCMO:** identify local foundation match (Health Care Foundation was approached in the past)



# Climate Protection Plan Update



- The City's Climate Protection Steering Committee (chaired by Ms. Joanne Collins) will be presented with a strategy to incorporate an update to the City's Climate Protection Plan **in concert with** developing a neighborhood-focused climate resiliency plan for KCMO.
- This update would include incorporation of the Envision sustainability rating system for infrastructure projects into planning, design, and construction of KC infrastructure projects

# WSD Climate Study

Predicted by 2100: Wetter springs, hotter and drier summers, and more periods of drought

## Hotter weather

- **64.4 degrees F** average temperature (from 56 degrees)
- **21.9 days** where temperature is above 105 degrees F (from .9 days)
- **25 additional frost-free days** due to later fall and earlier spring frosts

## More precipitation and stronger storms

- **44.6 inches** of precipitation annually (from 38.8)
- **4 inches** of precipitation in 1 day, maximum (from 3.4)
- **9.3 days** with more than 1.5 inches of precipitation (from 5)

## Expected Consequences:

---

Increase in heat-related public health threats

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Increased demand for summertime cooling

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Reduced demand for winter heating

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Poorer air quality (e.g. ground-level ozone)

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Increased flooding

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Additional stress on water supply, wastewater, and storm water management systems

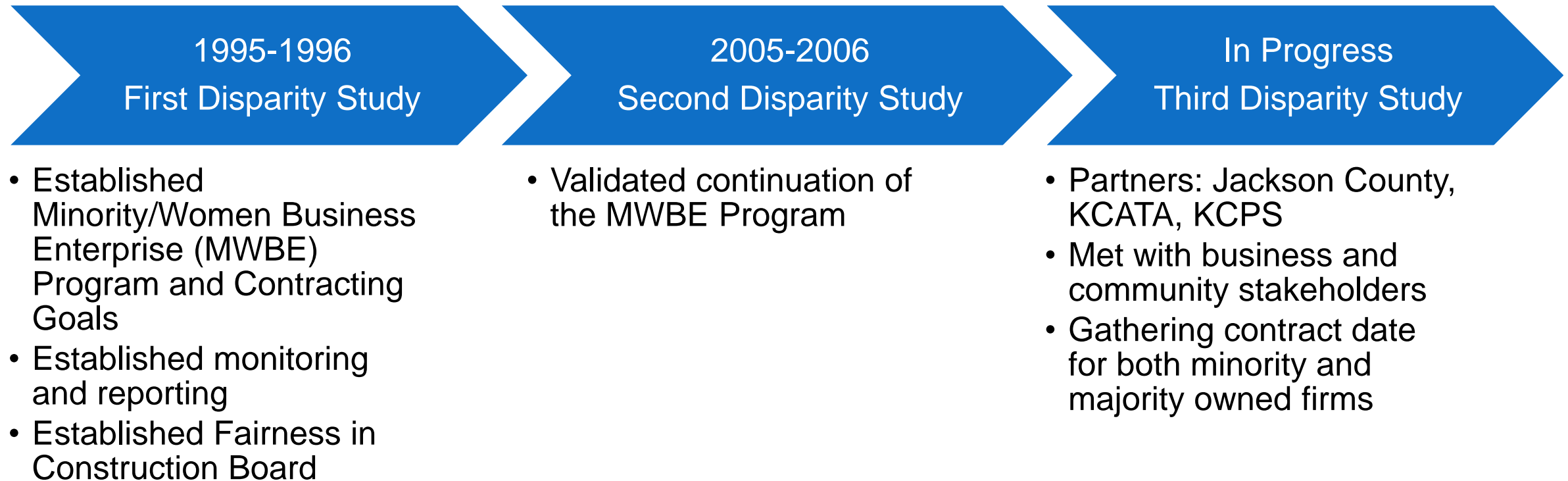


# Workforce Development

# Objective

Support local workforce development and continue to increase the number of local, minority, and women-owned business contracts by increasing awareness and response to City-issued RFQ/Ps through advertisements, Annual Capital Improvement Overview, and City-sponsored learning opportunities.

# Overview of Disparity Studies



# Overview of Existing Policies

	MBE	WBE
Contract Participation Goals		
Construction	15%	7%
Professional Services	13%	8%
Commodities	18%	10%
Construction Workforce Goals	10%	2%

- MWDBE Contract Participation Goals apply to construction contracts greater than \$300,000 and non-construction contracts greater than \$117,000 for City and statutory agencies.
- Construction Workforce Goals apply to construction projects greater than \$300,000 and requiring 800 or more construction labor hours funded or administered by the City.



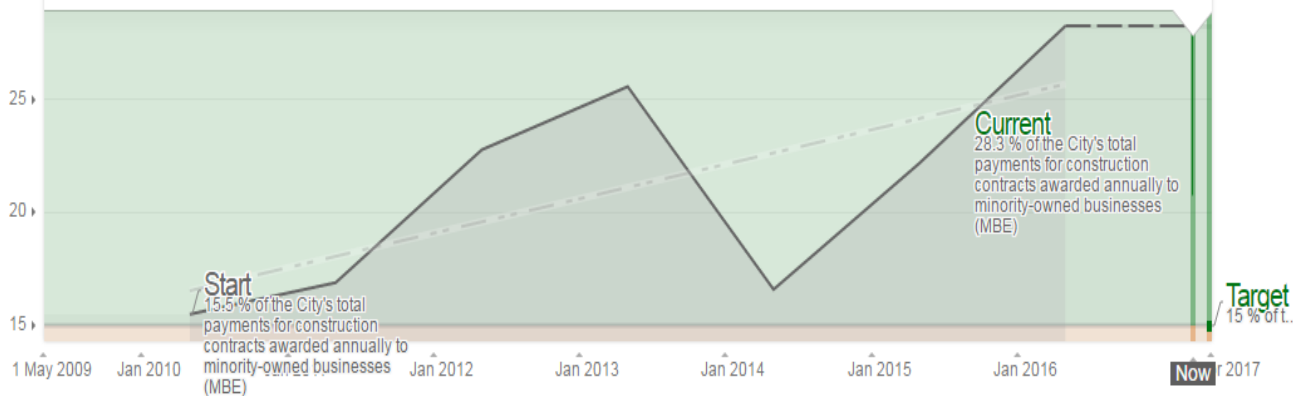
# FY16 Minority Business Enterprise (MBE) Participation in Construction and Professional Services

## MBE Construction Contracts

Goal: 15%

**28.3%** of the City's total payments for construction contracts awarded annually to minority-owned businesses (MBE)  
Current as of Apr 2016

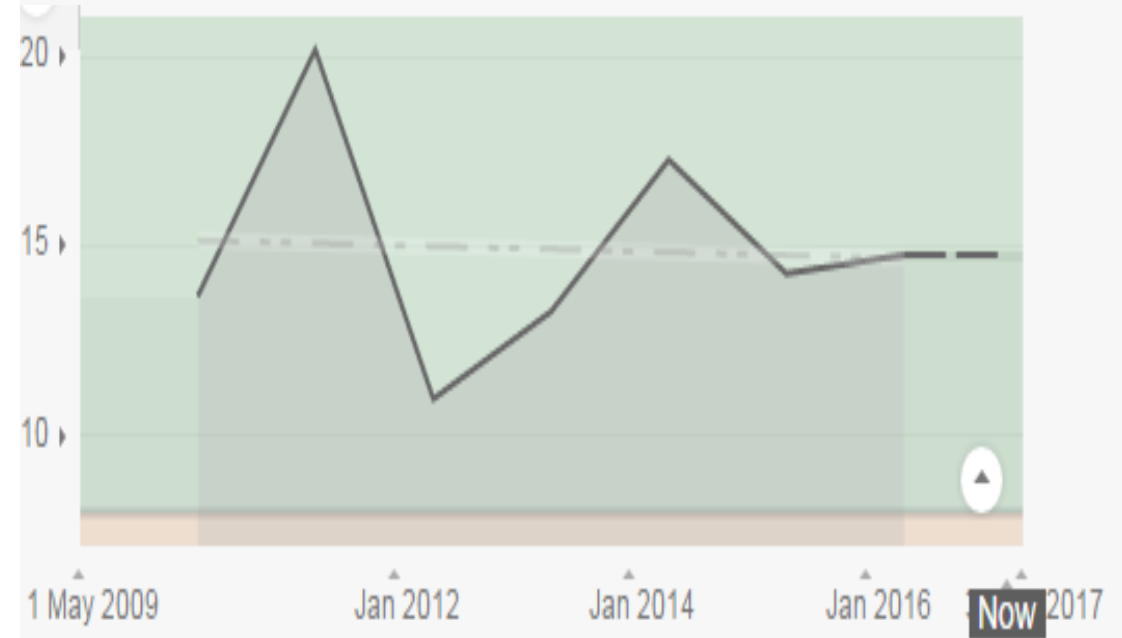
► **15%** of the City's total payments for construction contracts awarded annually to minority-owned businesses (MBE)  
Apr 2017 Target



## MBE Professional Service Contracts

Goal: 13%

**14.8%** of the City's total payments for professional services awarded annually to MBE



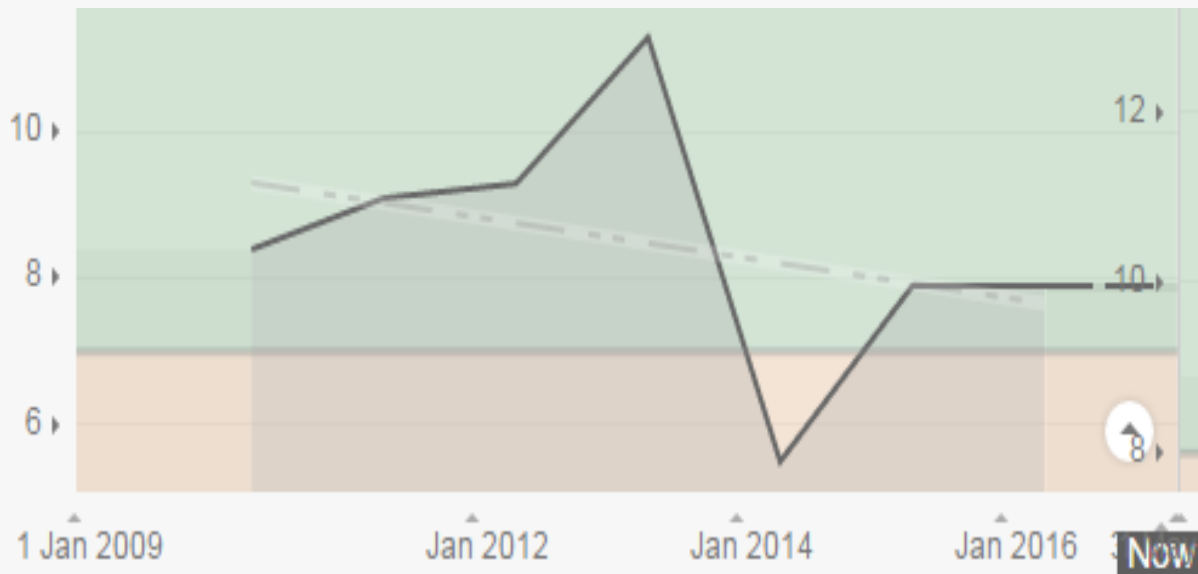
# FY16 Participation of Women Business Enterprises (WBE) in Construction and Professional Services

## WBE Construction Contracts

Goal: 7%

7.9

% of the City's total payments for construction contracts awarded annually to WBE

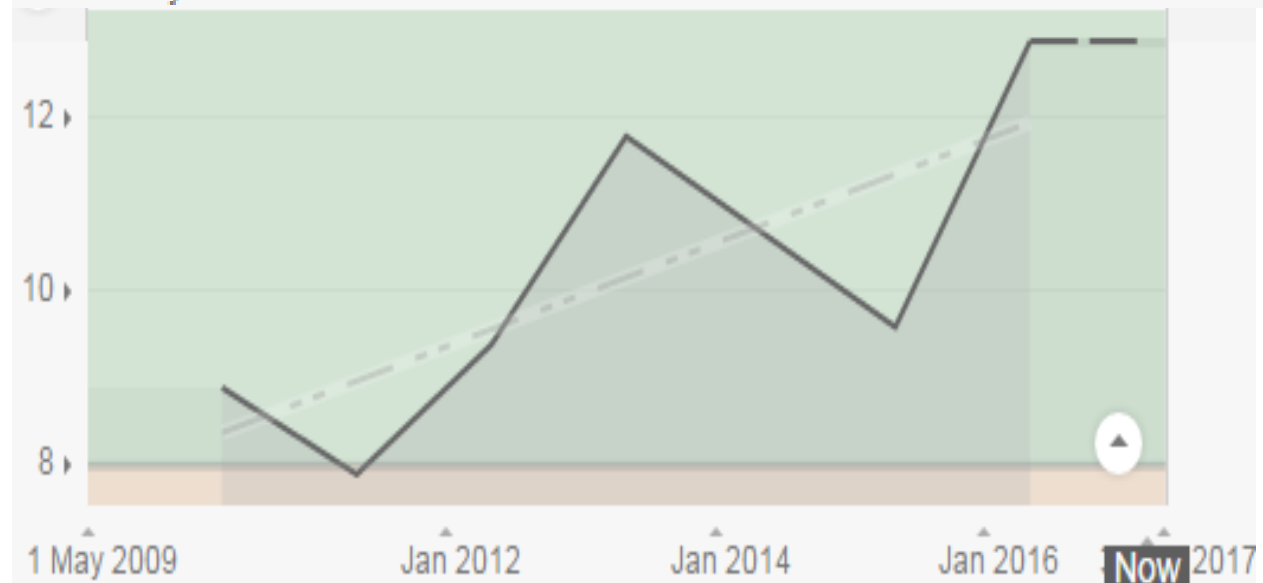


## WBE Professional Service Contracts

Goal: 8%

12.9

% of the City's total payments for professional services awarded annually to WBE



# Full Employment Council Sidewalks Project

- In the summer of 2016, Public Works contracted with the Full Employment Council to construct sidewalk, curb and drive improvements. They hired a concrete flatwork contractor as their sub who provided the technical skills and expertise and provided training to unskilled workers with the FEC.
- Project locations and approximate amounts were as follows:
  - Sidewalks on NE Parvin Rd from N Newton to N Corrington: \$230,500
  - Sidewalks at Maplewood Elementary: \$343,650.00
  - Sidewalks on N Jackson from NE Parvin to South: \$59,500

# For Change Initiative



- Short-term financing (lines of credit) for firms that are working as subs or primes on City projects
- Credit score: 620 (below industry standards compared to other institutions' 680-700 minimum score)
- Programs open to certified DBE, MBE, WBE, SLBE, SLBE-WSDEPS and GC's
- Firms must be in business for at least two years

## **FCI Program Success to Date**

- Over 18 approved lines of credit issued
- Valued at \$4.5 million to small business owners for city contracts
- More than 35 inquiries regarding the program



# Questions?

Stay up to date on progress at [kcstat.kcmo.org](http://kcstat.kcmo.org)

#KCStat

Next KCStat:

April 18, 9 AM: Planning, Zoning, and Economic Development

